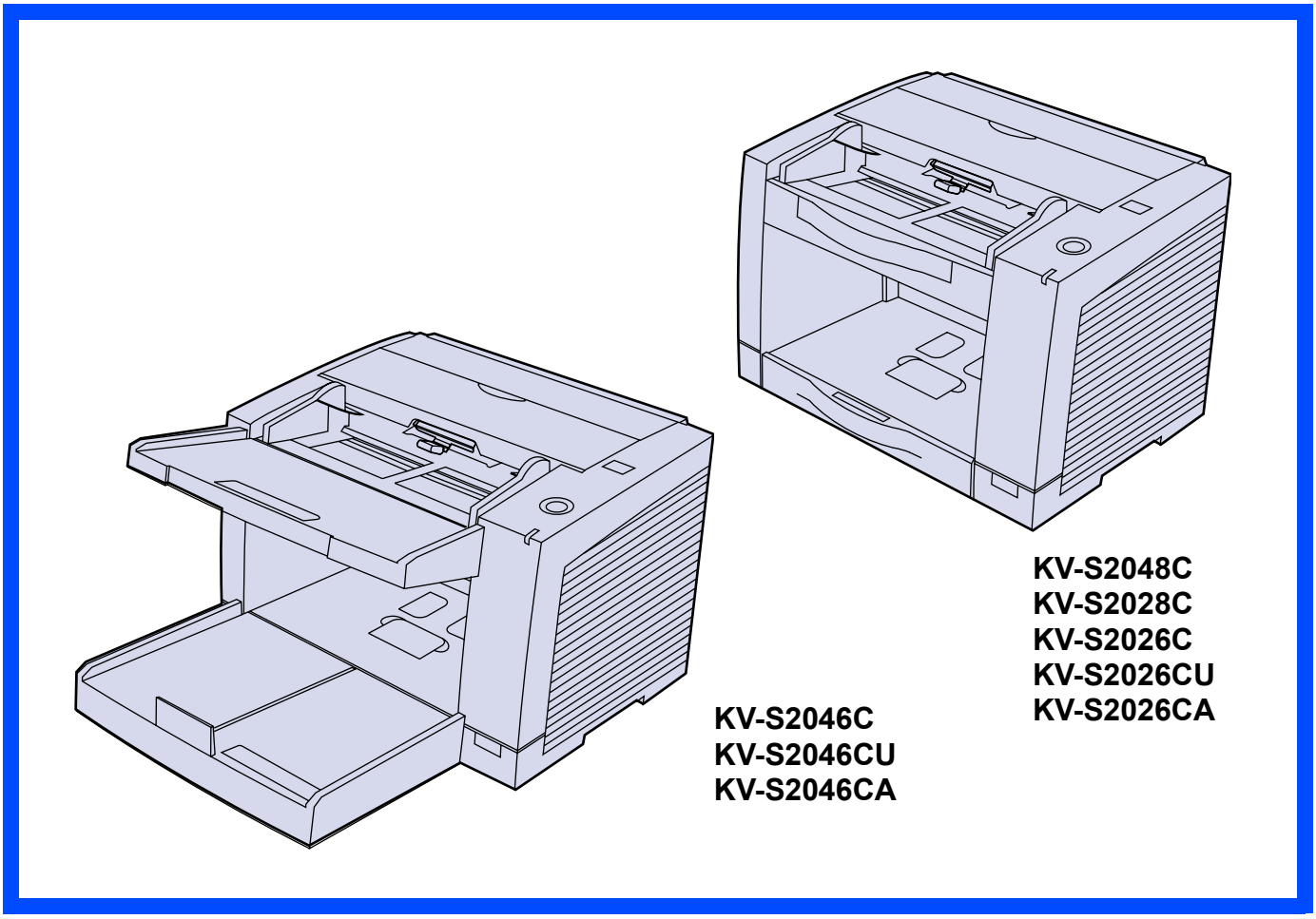
Panasonic

Operating Instructions

High Speed Color Scanner

Model No. **KV-S2048C**
KV-S2028C
KV-S2046C / S2046CU / S2046CA
KV-S2026C / S2026CU / S2026CA



These instructions contain information on operating the scanner. Before reading these instructions, please read the Installation Guide enclosed with this unit.

Keep the CD-ROM in the protective case. Do not expose the CD-ROM to direct sunlight or extreme heat and do not scratch or smudge the surface of the CD-ROM.

Thank you for purchasing a Panasonic High Speed Color Scanner.

- Panasonic supports your imaging needs with a reliable and easy to use document scanner.
- Panasonic has developed Panasonic Image Enhancement Technology to improve the quality of your scanned images even beyond the quality of your original document.

Illegal Duplication

It is unlawful to make duplication of certain documents.
Duplicating certain documents may be illegal in your country.
Penalties of fines and/or imprisonment may be imposed on those found guilty. The following are examples of items that may be illegal to duplicate in your country.

- Currency
- Bank notes and checks
- Bank and government bonds, and securities
- Passports, licenses, official or private documents, identification cards, and the like
- Copyright materials, or trademarks without the consent of the owner
- Postage stamps, and other negotiable instruments

This list is not inclusive, and no liability is assumed for either its completeness or accuracy.
In case of doubt, contact your legal counsel.

Notice:
Install your machine near a supervised area to prevent illegal duplication from being made.

As an ENERGY STAR® Partner, Panasonic has determined that this product meets the ENERGY STAR guidelines for energy efficiency.
However, KV-S2026C and KV-S2046C do not comply with the ENERGY STAR Eligibility Criteria after April 1, 2007.

- Microsoft, Windows, and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- IBM and AT are trademarks of International Business Machines Corporation in the United States, other countries, or both.
- ISIS, MultiStream, and QuickScan Pro are registered trademarks or trademarks of EMC Corporation.
- Adobe and Reader are registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Pentium is a trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.
- Each company's name or company product name is each company's trademark or registered trademark.

The information given in these Operating Instructions is subject to change without notice.

Table of Contents

Page

Before You Start

Notice 4

For Your Safety 5

Component Identification 9
- KV-S2048C, KV-S2028C, KV-S2026C / S2026CU / S2026CA 9
- KV-S2046C / S2046CU / S2046CA 10
- Power turn-on sequence 11
- About LED 11
- About the SCSI setting (for using SCSI interface only) 12

Installing Software 13
- System requirements 13
- CD-ROM Contents 13
- Complete installation 14
- All Drivers & Utilities installation 15
- Custom installation 16
- Application installation 17
- Viewing manuals from the CD-ROM 17
- Viewing manuals installed on your computer 17

Operation

Document Specifications 18
- Acceptable documents 18
- Unacceptable documents 18

Loading Documents 19
- When scanning multiple sheets 19

Care and Maintenance

Clearing Paper Jams 22
- Removing paper jams from the feeding section 22

Cleaning the Unit 24
- Outside of the scanner 24
- Inside the scanner 24
- Cleaning the reflector sheet for the ending sensor 24
- Cleaning the rollers and sensors 25
- Cleaning the CIS glasses and sensor rollers 27

Replacing Consumables 29
- Replacing the paper feed roller module 29
- Replacing the double-feed prevention roller module 32

Appendix

How to re-attach the sensor rollers 34
- Re-attach the sensor roller for back scanning to the ADF door 34
- Re-attach the sensor roller for front scanning 34

Shading Adjustment 35

Repacking Instructions 36
- KV-S2048C, KV-S2028C, KV-S2026C / S2026CU / S2026CA 36
- KV-S2046C / S2046CU / S2046CA 37

Specifications 38
- Changing the paper feed roller module and double-feed prevention roller . . . 39

Troubleshooting 40

Index 42

Notice

Federal Communications Commission Requirements (For United States only)

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Warning: To assure continued FCC compliance, the user must use only shielded interface cable and the provided power supply cord. Also, any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

For your safety please read the following text carefully. (For United Kingdom only)

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5 amp. fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps. and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark or the BSI mark on the body of the fuse. If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

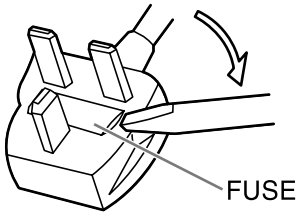
If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safely.
There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp. socket.
If a new plug is to be fitted please observe the wiring cord as shown below. If in any doubt please consult a qualified electrician.
WARNING: This appliance must be earthed.
IMPORTANT: The wires in this mains lead are coloured in accordance with the following cord.

Green-and-Yellow	: Earth
Blue	: Neutral
Brown	: Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured Green-and-Yellow must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol ⏚ or coloured Green-and-Yellow.
The wire which is coloured Blue must be connected to the terminal in the plug which is marked with the letter N or coloured Black.
The wire which is coloured Brown must be connected to the terminal in the plug which is marked with the letter L or coloured Red.

How to replace the fuse :
Open the fuse compartment with a screwdriver and replace the fuse.



For Your Safety

To prevent severe injury and loss of life, read this section carefully before using the unit to ensure proper and safe operation of your unit.

■ This section explains the graphic symbols used in this manual

⚠ WARNING	Denotes a potential hazard that could result in serious injury or death.
⚠ CAUTION	Denotes hazards that could result in minor injury or damage to the unit.

	These symbols are used to alert operators to a specific operating procedure that must not be performed.
	These symbols are used to alert operators to a specific operating procedure that must be emphasized in order to operate the unit safely.

⚠ WARNING

Power and Ground Connection

The power source voltage of this unit is listed on the nameplate.
Only plug the unit into an AC outlet with the proper voltage.
If you use a cord with an unspecified current rating, the unit or plug may emit smoke or become hot to the touch.

When you operate this product, the power outlet should be near the product and easily accessible.

To ensure safe operation the power cord supplied must be inserted into a standard three-prong AC outlet which is effectively grounded (earthed) through the normal wiring.

The fact that the equipment operates satisfactorily does not imply that the power point is grounded (earthed) and that the installation is completely safe. For your safety, if in any doubt about the effective grounding (earthing) of the power point, consult a qualified electrician.

If the plug cannot be inserted into the AC outlet, contact a licensed electrician to replace the AC outlet with a properly grounded (earthed) one.

Do not defeat the purpose of the grounding (earthing) plug (ex. do not use a conversion plug).

Plug the power cord firmly into an AC outlet. Otherwise, it can cause fire or electric shock.

Do not pull, bend, rest objects on, or chafe the power cord, and plug.
Damage to the power cord or plug can cause fire or electric shock.

Do not attempt to repair the power cord, or plug. If the power cord or plug is damaged or frayed, contact an authorized service representative for a replacement.

Ensure that the plug connection is free of dust. In a damp environment, a contaminated connector can draw a significant amount of current that can generate heat, and eventually cause fire if left unattended over an extended period of time.

Never touch the plug with wet hands. Danger of electric shock exists.

Stop operation immediately if the unit emits smoke, excessive heat, abnormal smell, or unusual noise. These conditions can cause fire or electric shock. Immediately turn the unit off, and unplug the power cord, and contact your dealer for service.

When disconnecting the unit, grasp the plug instead of the cord. Pulling on a cord forcibly can damage it, and cause fire or electric shock.

Operating Safeguards

If metal fragments or water gets into the unit, turn the unit off, and unplug the unit immediately. Contact your dealer for service. Operating the contaminated unit can cause fire or electric shock.

Do not open covers, and do not attempt to repair the unit yourself. Contact your dealer for service.

Do not alter the unit or modify any parts. Alteration or modification can cause fire or electric shock.

During thunderstorms, do not touch the unit and plug. It may cause an electric shock.

Roller Cleaning Paper

Do not drink or inhale the roller cleaning paper fluid including isopropyl alcohol.

The roller cleaning paper may be harmful to sensitive skin. Please use protective gloves.

Do not use the roller cleaning paper near a heater or open flame.

⚠ CAUTION

Power

The unit should be used only with the power cord enclosed with the unit.

When the unit is not used over an extended period of time, switch it off, and unplug it. If an unused unit is left connected to a power source for a long period, degraded insulation may cause electric shock, current leakage, or fire.

Installation and Relocation

Do not position the unit in a location where it is unstable.

To prevent fire or shock hazard, do not expose this unit to rain or any type of moisture.

Do not place the unit in a hot humid or dusty environment.
Prolonged exposure to these adverse conditions may cause fire or electric shock.

When moving the unit, be sure to unplug the power cord from the AC outlet. If the unit is moved with the power cord attached, it can cause damage to the cord which could result in fire or electric shock.

Do not use the tray hanging out of a table.

When carrying the unit, do not use the trays as handles.

When carrying the unit, hold the both side grips.

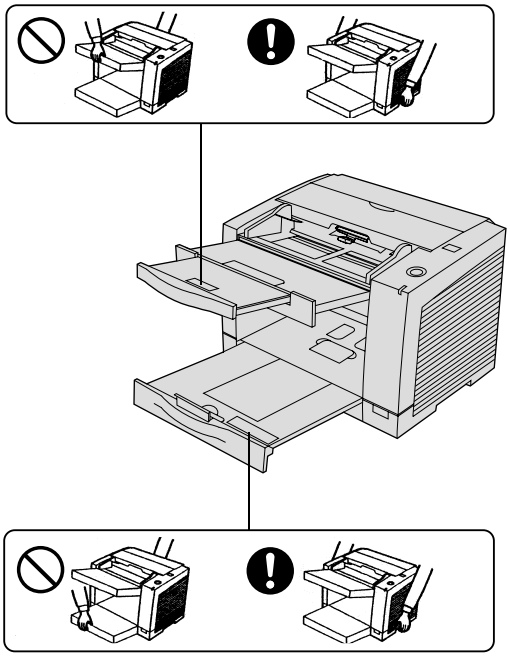
Operating Safeguards

If the unit falls down or gets damaged, turn the unit off, and unplug the power cord. Otherwise, it may cause fire or electric shock.

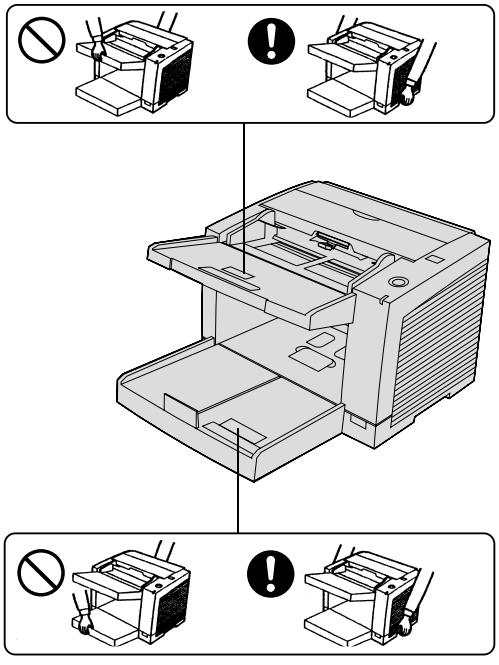
Do not place any liquids or heavy items on the unit.
Accidental spillage of liquid into the unit may cause severe damage. If this occurs, turn the unit off, unplug the power cord, and contact your dealer for service.

Caution Labels

■ KV-S2048C, KV-S2028C, KV-S2026C / S2026CU / S2026CA



■ KV-S2046C / S2046CU / S2046CA



Precautions

■ Installation

- Do not place the scanner in direct sunlight, in a cold draft, or near heating apparatus.
- Do not place the scanner near apparatus which generate electronic or magnetic noise.
- Protect the scanner from static electricity.
- Do not move the scanner immediately from a cold place to a warm place. It may cause dew.

■ CD-ROM

- Handle a CD-ROM carefully.
- Prevent a CD-ROM from damage, and keep clean.

■ Roller Cleaning Paper

- Do not store the roller cleaning paper in direct sunlight or in a place with temperature over 40 °C (104 °F).
- Only use the roller cleaning paper to clean the rollers and scanning area.
- If you need more information about the roller cleaning paper, please refer to the Material Safety Data Sheet (MSDS).
- Please ask your Panasonic sales company about obtaining the Material Safety Data Sheet.

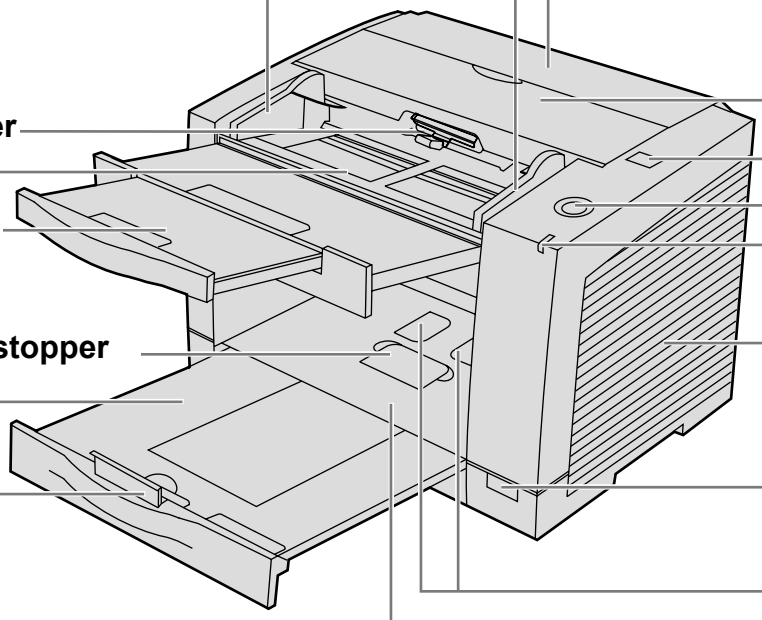
KEEP AWAY FROM FIRE.

■ Others

- Remove all staples from the document before scanning.
- Do not use thinner, benzine, or cleaners containing abrasives or surfactants, for cleaning the outside of scanner.

Component Identification

■ KV-S2048C, KV-S2028C, KV-S2026C / S2026CU / S2026CA



Document guides

Imprinter door
(for KV-S2048C only)

ADF door

Paper feed roller

Feed tray

ADF door release

STOP/START button

LED

Feed extension tray

Business card stopper

Radiation vent

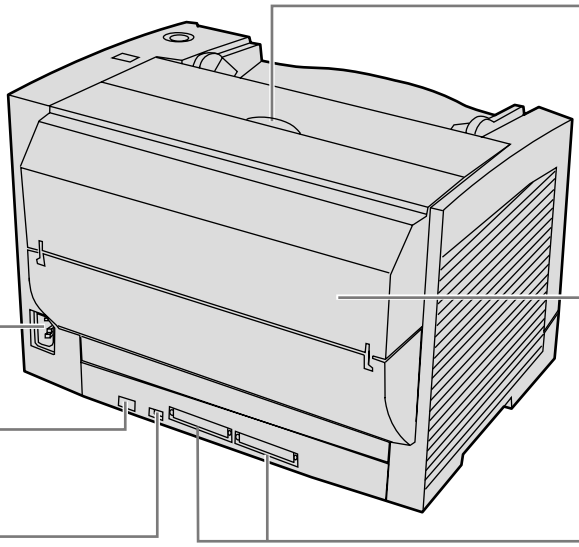
Exit extension tray

Exit stopper

Power switch

Business card guides

Exit tray



Imprinter door pull
(for KV-S2048C only)

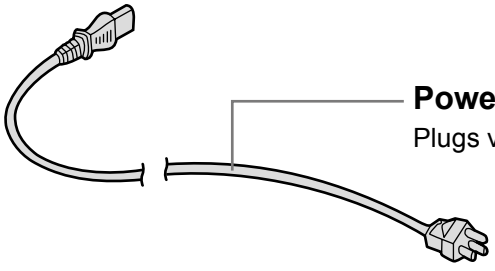
Imprinter door
(for KV-S2048C only)

AC inlet

USB connector

DIP switch
(for KV-S2026C / S2026CU / S2026CA only)

SCSI connectors
(for KV-S2026C / S2026CU / S2026CA only)

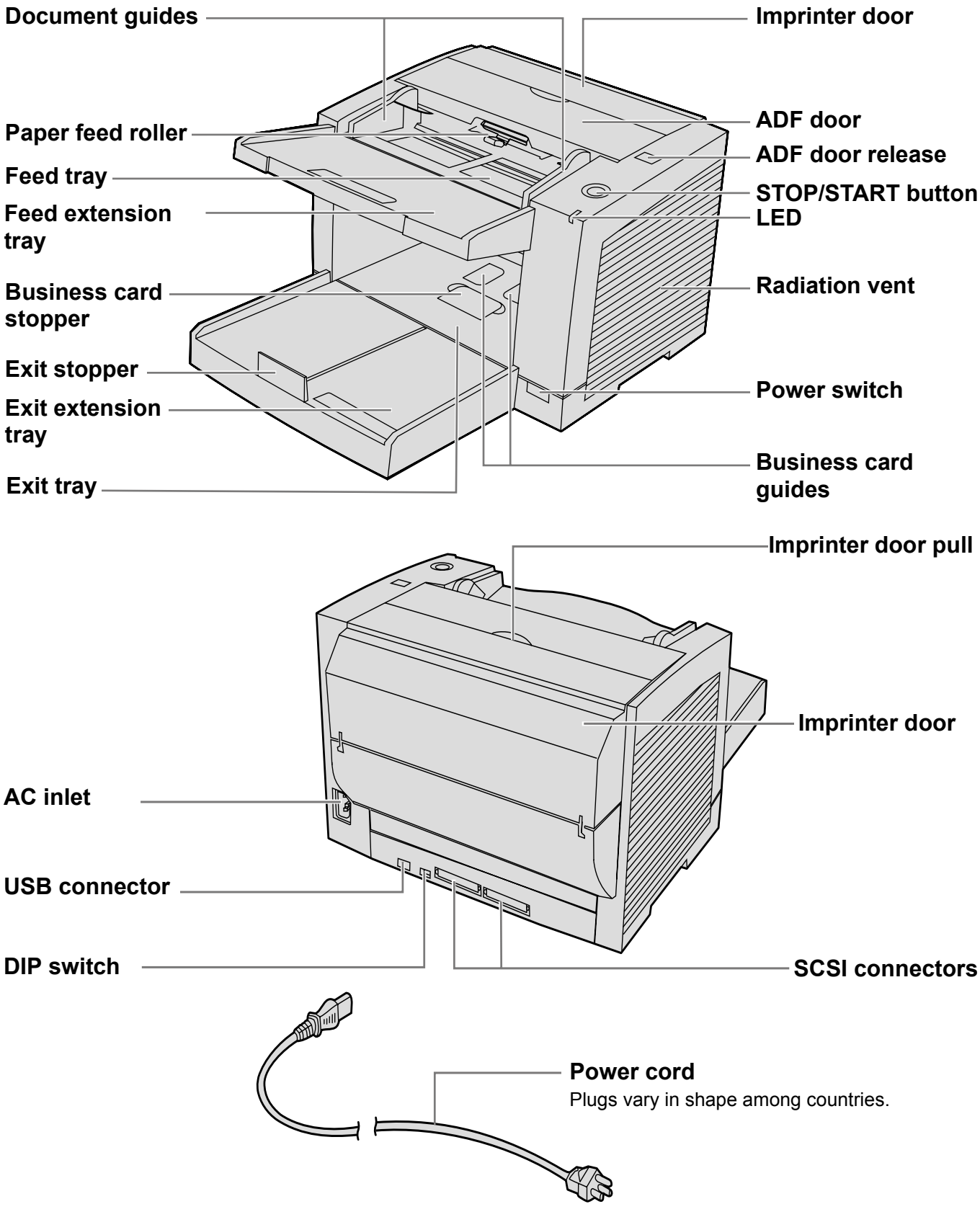


Power cord
Plugs vary in shape among countries.

Note:

- KV-S2048C and KV-S2028C have only USB interface.

■ KV-S2046C / S2046CU / S2046CA



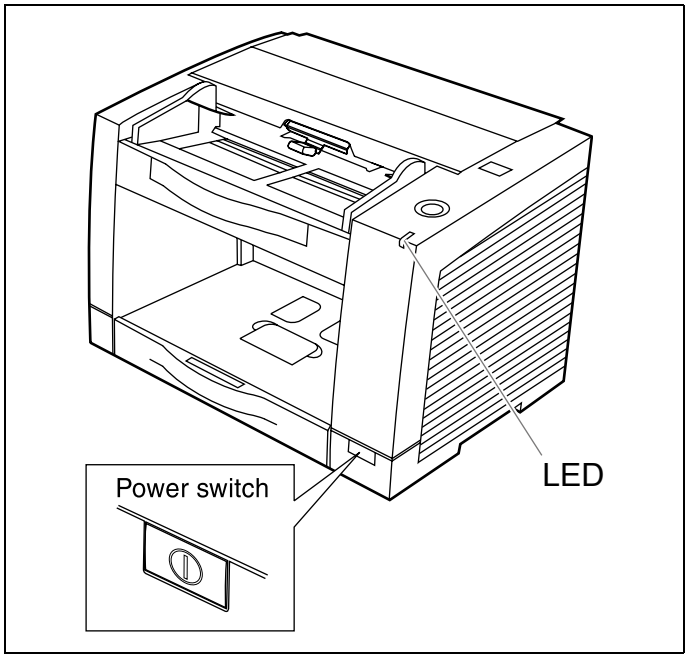
■ Power turn-on sequence

1 Turn on the power of the scanner.

- **Press the power switch. (The LED will now light.)**

2 Turn on the power of the host computer after scanner's LED lights green.

- **In case of the USB connection, the host computer recognizes the scanner automatically when the scanner is powered on even after the host computer is powered on.**



■ About LED

LED indicates the status of the scanner as follows:

LED light	Status
Green	Ready to scan or scanning
Green (Blink)	Sleep mode
Orange	Ready to scan or scanning with warning *1
Orange (Blink)	Initializing Sleeping with warning *1 *3
Red	An error occurred *2

*1 The rollers need to be cleaned or replaced.

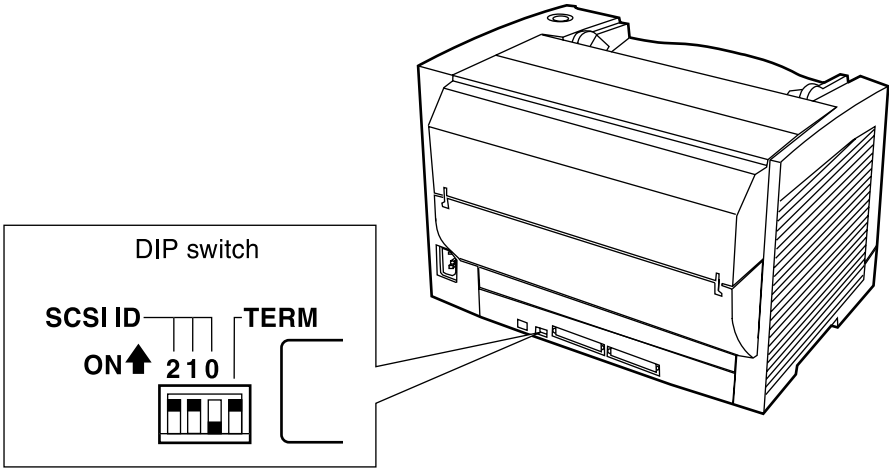
*1 *2 Check the status of the scanner using the User utility. The User utility is included in the CD-ROM.

*3 With KV-S2048C and KV-S2028C, the LED blinks in green.

■ About the SCSI setting (for using SCSI interface only)

(For KV-S2046C / S2046CU / S2046CA / S2026C / S2026CU / S2026CA)

When connecting the scanner to a SCSI chain using a SCSI cable, perform the SCSI ID setting correctly. The scanner is provided with a DIP switch for the SCSI ID No. setting and the terminator setting.



SCSI ID Setting

ID No.	Switch			Remarks
	#2	#1	#0	
0	OFF	OFF	OFF	
1	OFF	OFF	ON	
2	OFF	ON	OFF	
3	OFF	ON	ON	
4	ON	OFF	OFF	
5	ON	OFF	ON	
6	ON	ON	OFF	Default setting
7	ON	ON	ON	

SCSI Terminator Setting

Function	Switch	Description
Enable	ON	• The last device in the SCSI chain • Default setting
Disable	OFF	Not the last device in the SCSI chain

Installing Software

■ System requirements

	KV-S2048C KV-S2028C	KV-S2046C / S2046CU / S2046CA KV-S2026C / S2026CU / S2026CA
Computer	IBM® PC/AT® or compatible machine with a CD-ROM drive	
CPU	Pentium® III, 1GHz or higher	
OS	Windows® 2000*1, Windows® XP*2, Windows Vista™ *3 (64 bit is not available.)	
Interface	USB 2.0	USB 2.0 SCSI III Recommended SCSI board Adaptec SCSI 2930U / 2940U / 29160N / 19160 With Windows Vista: Adaptec 29160N / 19160
Memory	256 MB or higher	
HDD	1 GB or more free space is required.	

*1 Microsoft® Windows® 2000 operating system (hereafter Windows 2000)
*2 Microsoft® Windows® XP operating system (hereafter Windows XP)
*3 Microsoft® Windows Vista™ operating system (hereafter Windows Vista)

- The above system requirements may not satisfy recommendation of all operating system and bundled application softwares.

■ CD-ROM Contents

Contents	
Drivers	Device Driver
	TWAIN
	ISIS
Applications	RTIV
	QuickScan Pro™ Demo
Utilities	User Utility
Manuals	Installation Guide
	Operating Instructions
	PIE Reference Manual
	RTIV Reference Manual
	User Utility Reference Manual
Others	Control Sheet
	Warranty Information (U.S.A. Only)

- RTIV (Reliable Throughput Imaging Viewer) is a Panasonic original application software, and does not require either TWAIN driver nor ISIS driver.
- PIE is an acronym for Panasonic Image Enhancement Technology.
- To view manuals, Adobe® Reader® must be installed.
- If the CD-ROM does not automatically start, please run “CDRun.exe” on the CD-ROM.
- There are some restrictions for QuickScan Pro due to being a trial version.
- When using QuickScan Pro, the ISIS driver is required.
- The control sheets are stored as PDF files in the CD-ROM provided with the scanner. For use them, print the control sheets in the same size as the document pages to be scanned.

Make sure to login to Windows 2000 / Windows XP / Windows Vista as an administrator.

■ Complete installation

All drivers, applications, utilities, and manuals can be installed at the same time using the Complete installation.

1. Turn off the power of the scanner.
2. Insert the CD-ROM into your CD/DVD drive on your computer.
3. If you have a feature called 'Autorun' activated, this will start the installation process automatically.

   Note:
   - If the AutoPlay dialog box is displayed in Windows Vista, select 'CDRun.exe'.
   - If the program does not automatically start, click [Start], click [Run...], click [Browse...], and select the CD/DVD drive containing the installation software, double-click on "CDRun.exe" in the root directory to manually start the installation routine, then click [OK].
4. Select your scanner.
5. Select the [Complete] from the [Installation] list.
6. Follow the instructions on the screen.
   If the screen 'Windows* can't verify the publisher of this driver software' appears, continue with the installation by selecting 'Install this driver software anyway'.
7. Turn on the power of the scanner.
8. Follow the instructions of the hardware wizard to complete the installation.
   The installation process is performed automatically in Windows Vista.

Even if the screen 'Digital Signature was not found for this driver' or 'has not passed Windows Logo testing…' appears, continue with the installation.

* Microsoft® Windows® operating system (hereafter Windows)

■ All Drivers & Utilities installation

All drivers, utilities, and manuals can be installed at the same time using the All Drivers & Utilities installation.

1. Turn off the power of the scanner.
2. Insert the CD-ROM into your CD/DVD drive on your computer.
3. If you have a feature called ’Autorun’ activated, this will start the installation process automatically.

   Note:
   - If the AutoPlay dialog box is displayed in Windows Vista, select ’CDRun.exe’.
   - If the program does not automatically start, click [Start], click [Run...], click [Browse...], and select the CD/DVD drive containing the installation software, double-click on “CDRun.exe” in the root directory to manually start the installation routine, then click [OK].
4. Select your scanner.
5. Select the [All Drivers & Utilities] from the [Installation] list.
6. Follow the instructions on the screen.
   If the screen 'Windows can't verify the publisher of this driver software' appears, continue with the installation by selecting 'Install this driver software anyway'.
7. Turn on the power of the scanner.
8. Follow the instructions of the hardware wizard to complete the installation.
   The installation process is performed automatically in Windows Vista.

Even if the screen ‘Digital Signature was not found for this driver’ or ‘has not passed Windows Logo testing···’ appears, continue with the installation.

■ Custom installation

Each driver, utility, and manual can be installed using the Custom installation selection, as required.

1. Turn off the power of the scanner (only when installing Device Driver).
2. Insert the CD-ROM into your CD/DVD drive on your computer.
3. If you have a feature called 'Autorun' activated, this will start the installation process automatically.

   Note:
   - If the AutoPlay dialog box is displayed in Windows Vista, select 'CDRun.exe'.
   - If the program does not automatically start, click [Start], click [Run...], click [Browse...], and select the CD/DVD drive containing the installation software, double-click on "CDRun.exe" in the root directory to manually start the installation routine, then click [OK].
4. Select your scanner.
5. Select the [Custom] from the [Installation] list.
6. Select a driver, an utility, or a manual.
   If the screen 'Windows can't verify the publisher of this driver software' appears, continue with the installation by selecting 'Install this driver software anyway'.
7. Follow the instructions on the screen.

When installing device driver, proceed following steps.

8. Turn on the power of the scanner.
9. Follow the instructions of the hardware wizard to complete the installation.
   The installation process is performed automatically in Windows Vista.

Even if the screen 'Digital Signature was not found for this driver' or 'has not passed Windows Logo testing···' appears, continue with the installation.

■ Application installation

RTIV and/or QuickScan Pro Demo can be installed as follows.

1 Insert the CD-ROM into your CD/DVD drive on your computer.

2 If you have a feature called 'Autorun' activated, this will start the installation process automatically.

Note:
- If the AutoPlay dialog box is displayed in Windows Vista, select 'CDRun.exe'.
- If the program does not automatically start, click [Start], click [Run...], click [Browse...], and select the CD/DVD drive containing the installation software, double-click on "CDRun.exe" in the root directory to manually start the installation routine, then click [OK].

3 Select your scanner.

4 Select the [RTIV] or the [Quick Scan Pro Demo] from the [Installation] list.

5 Follow the instructions on the screen.
The installation process is performed automatically in Windows Vista.

Even if the screen 'Digital Signature was not found for this driver' or 'has not passed Windows Logo testing···' appears, continue with the installation.

■ Viewing manuals from the CD-ROM

All manuals on the CD-ROM can be viewed using the Adobe Reader.

1 Insert the CD-ROM into your CD/DVD drive on your computer.

2 If you have a feature called 'Autorun' activated, this will start the installation process automatically.

Note:
- If the AutoPlay dialog box is displayed in Windows Vista, select 'CDRun.exe'.
- If the program does not automatically start, click [Start], click [Run...], click [Browse...], and select the CD/DVD drive containing the installation software, double-click on "CDRun.exe" in the root directory to manually start the installation routine, then click [OK].

3 Select your scanner.

4 Select a manual from the list.

■ Viewing manuals installed on your computer

All manuals installed on your computer can be viewed as follows.

1 Click [Start], and then click [All Programs] - [Panasonic] - [Scanner Manuals].
- For Windows 2000, click [Program] instead of [All Programs].

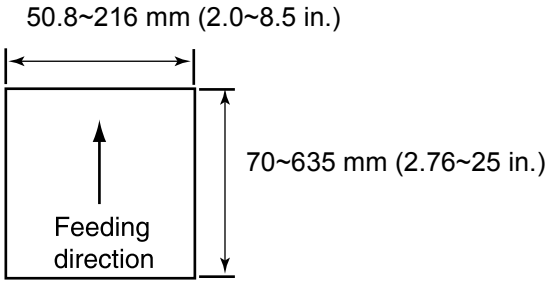
Note:
- To install manuals on your computer, see page 16.

2 Select the desired manual.

Document Specifications

■ Acceptable documents

Document size:



Paper thickness:

Single paper feeding	40~127 g/m^2 (10.7~33.9 lb.)
Continuous paper feeding	50~127 g/m^2 (13.3~33.9 lb.)

The height of all the documents on the tray should not exceed the limit mark on the document guide.
Single paper feeding is recommended for papers exceeding the legal size length.

■ Unacceptable documents

The following types of documents may not scan properly:

- Curled, wrinkled, or folded documents

- Perforated or punched documents
- Not rectangular or irregularly shaped documents like documents with tags
- Thermal or photosensitive paper
- Extremely smooth, shiny paper, or paper that is highly textured
- Carbonless paper
- Creased or ripped paper
- Coated paper

When documents cannot be scanned properly, try to change the resolution or the number of documents scanned.

The following types of documents must be avoided:

- Irregular document thickness, such as envelopes
- Damaged or notched document
- Documents out of specified size, thickness, and weight
- Documents containing hard attachments such as metal or plastic (ex. Clips or staples)
- Bound or glued documents
- Document with wet ink or cinnabar seal ink
- Paper with carbon
- Cloths and plastic films
- Light penetrating documents such as OHP sheet and tracing paper

Loading Documents

■ When scanning multiple sheets

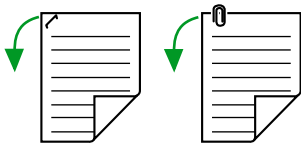
- Remove all staples from the document before scanning.
- Curled documents may cause a paper jam or damaging the document, therefore, set the document flat before scanning.
- When scanning very important documents, confirm that the number of scanned images matches the number of actual pages.

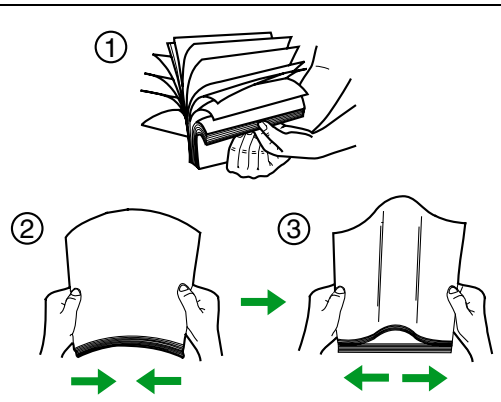
1 Documents that have been stapled together or stacked together (as in a file folder) will need to be separated.

(1)Fan the stack of documents to separate all the edges.
(2)Hold both ends and bend the documents as shown in the illustration.
(3)To flatten the documents, hold firmly and pull them apart as shown in the illustration.

Repeat these steps as necessary.

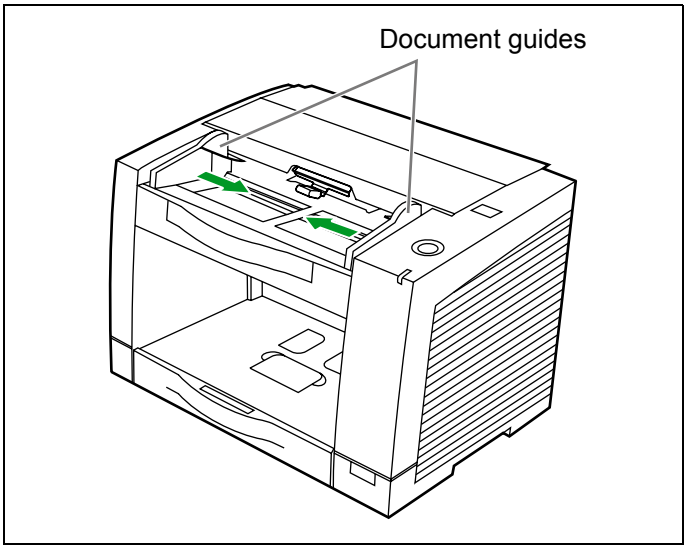
Prior to scanning, remove, all staples and paper clips from pages.





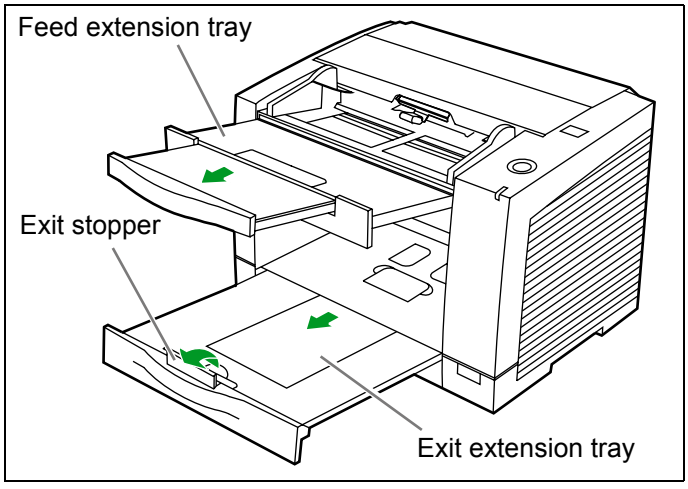
2 Carefully align the documents.

3 Adjust the document guides slightly larger than the actual size of the documents.



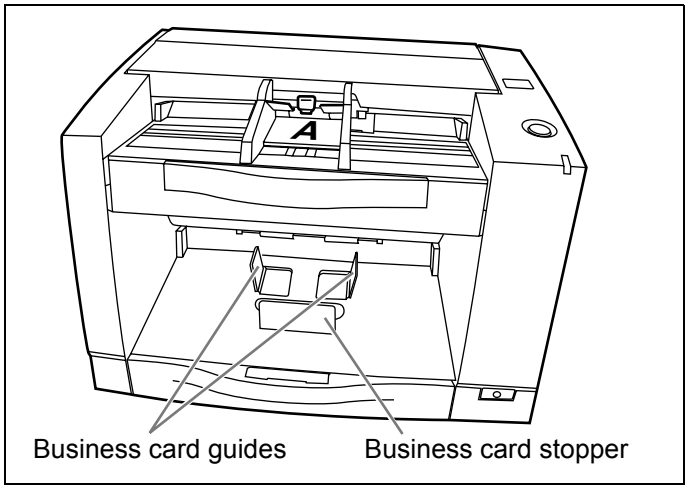
4 When scanning paper longer than the feed tray, pull out the feed extension tray from the feed tray and the exit extension tray as shown in the figure on the right.

- **The exit extension tray of KV-S2046C, KV-S2046CU and KV-S2046CA is fixed. Adjust the position of the exit stopper**.



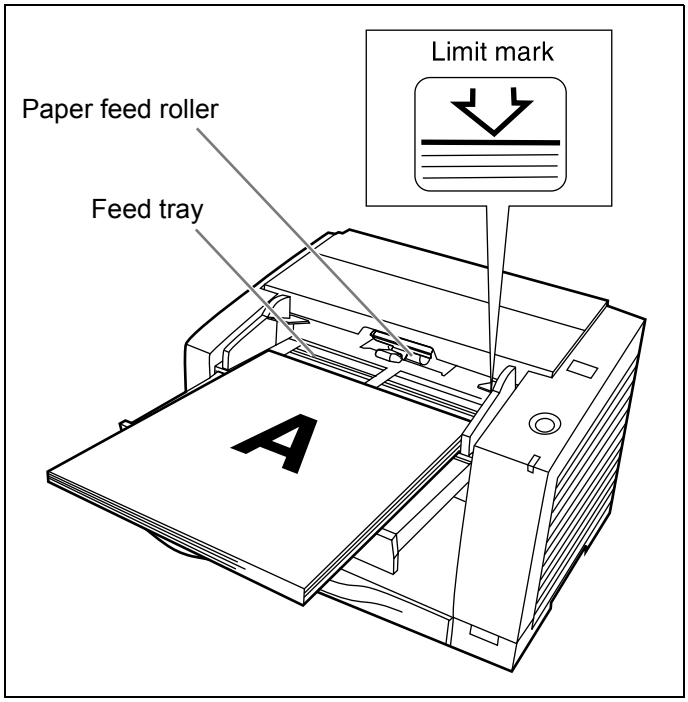
- **When using small sized documents like business cards, raise the business card guides and the business card stopper.**

Caution:
Do not use the business card guides and the business card stopper for larger documents than their acceptable size. It will cause paper jams.

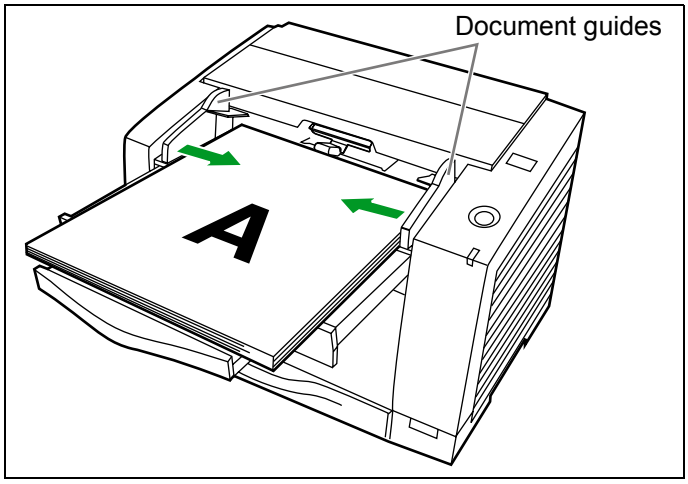


5 Place the documents on the feed tray with the side to be scanned facing up.

- **Be sure to place the documents on the feed tray as shown in the figure on the right.**
- **The amount of documents should not exceed the limit mark on the document guide. This may cause a paper jam or skew.**

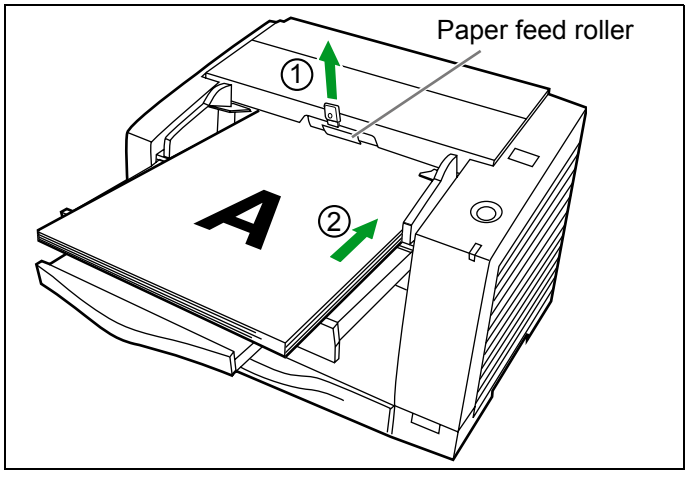


6 Adjust the document guides to the size of the documents.



7 Set documents under the paper feed roller.

(1)Lift the lever of the paper feed roller as shown in the figure.
(2)Push documents in the direction of the arrow until they stop under the paper feed roller.



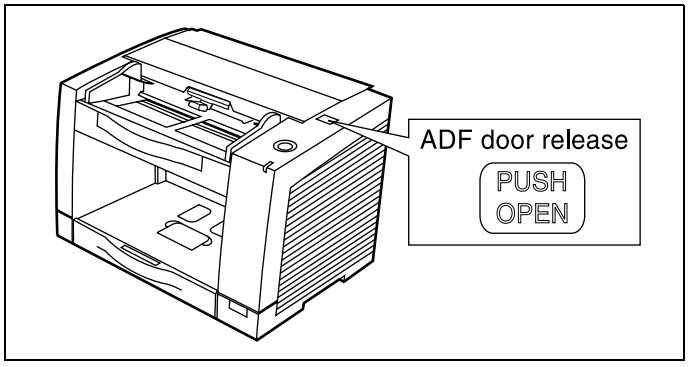
Clearing Paper Jams

Torn documents, thin documents or documents that are creased on the top edge may cause paper jams. If a paper jam occurs, remove the jammed sheet according to the following procedure.

■ Removing paper jams from the feeding section

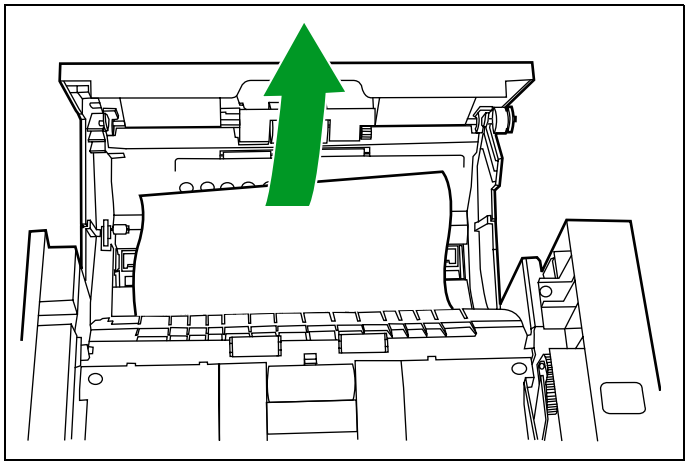
1 Remove all documents from the feed tray.

2 Push the ADF door release to open the ADF door.

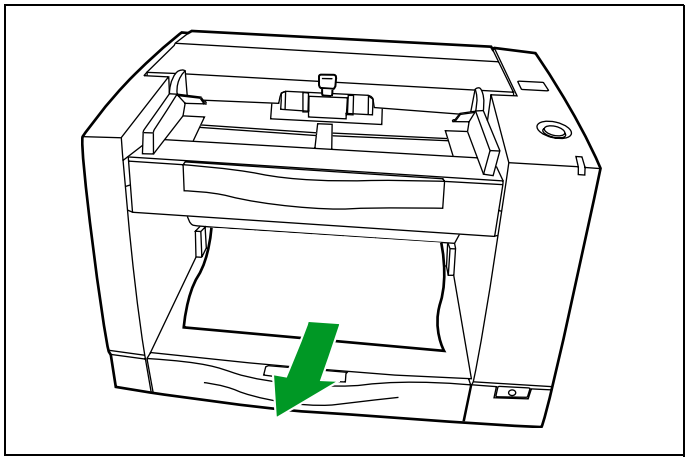


3 Remove the jammed document.

- **If the jammed document remains at the feed tray side, pull it up.**

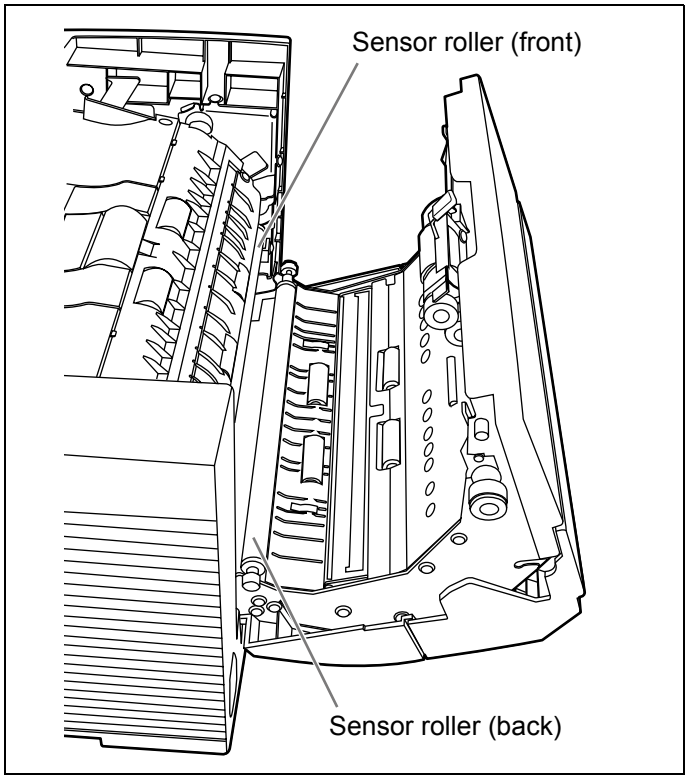


- **If the jammed document appears at the exit tray side, remove it from the exit side.**



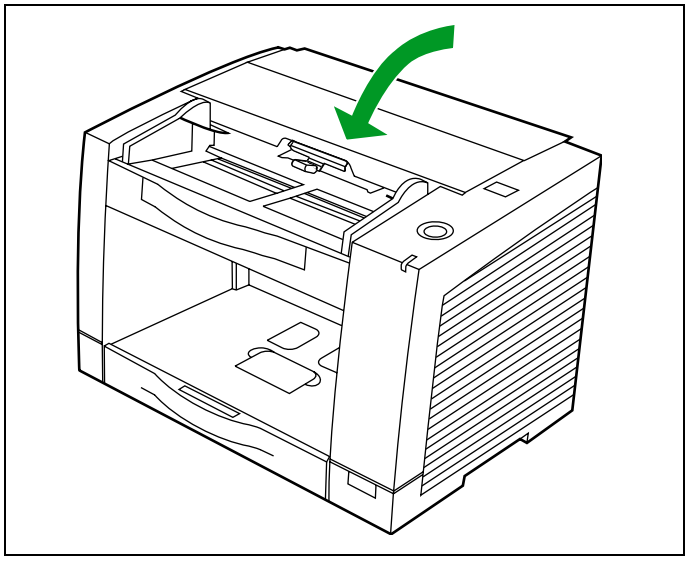
4 Make sure that the sensor rollers are installed properly, before closing the ADF door.

- **If the sensor rollers are removed, re-attach them. (Refer to page 34.)**



5 Close the ADF door.

- **When you close the ADF door, close it securely until the door is locked.**



Cleaning the Unit

■ Outside of the scanner

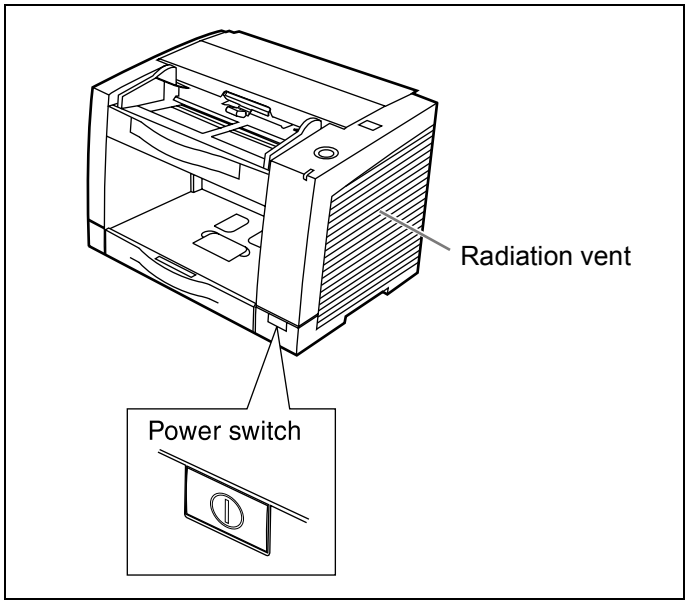
Clean the unit at least once a month.

1 Turn the power off.

2 Clean the cover with a soft cloth.

- **Please use a water-dampened cloth that has been throughly wrung.**
- **Do not use thinner, benzine, or cleaners containing abrasives or surfactants.**

3 Remove dirt and dust from the radiation vent with a brush.

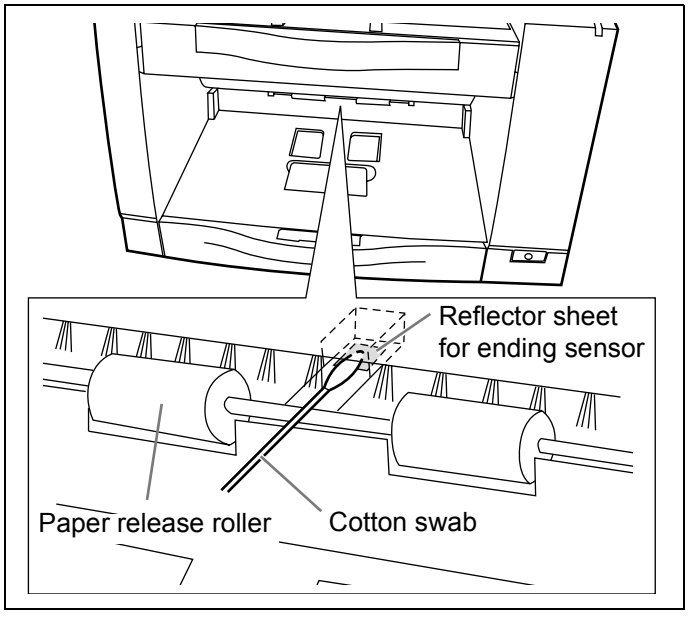


■ Inside the scanner

- Clean the unit at least once a week or when 20,000 sheets have been scanned, whichever comes first.
- Clean the rollers and sensors if paper jamming or multiple-sheet feeding occurs frequently. (Refer to pages 25-26.)
- Clean the CIS glasses and sensor rollers when lines appear on the scanned images. (Refer to pages 27-28.)
- If the documents you scan are dirty, then the scanner components will also become dirty. To maintain proper scanning, clean the scanner components frequently.

■ Cleaning the reflector sheet for the ending sensor

- **Remove dust on the reflector sheet of the ending sensor with a cotton swab.**
- **The reflector sheet is behind the center of the paper release rollers.**

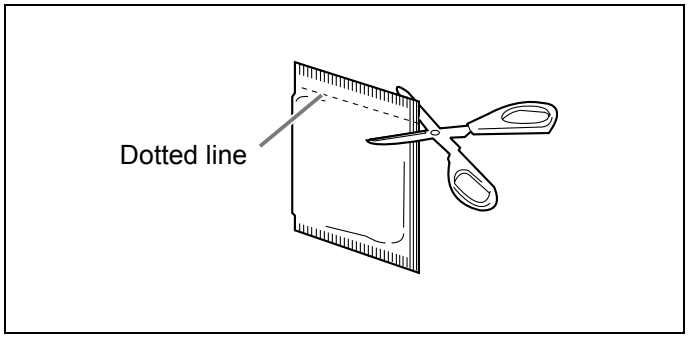


■ Cleaning the rollers and sensors

Roller cleaning paper:

Open the bag on the dotted line and take out the roller cleaning paper.

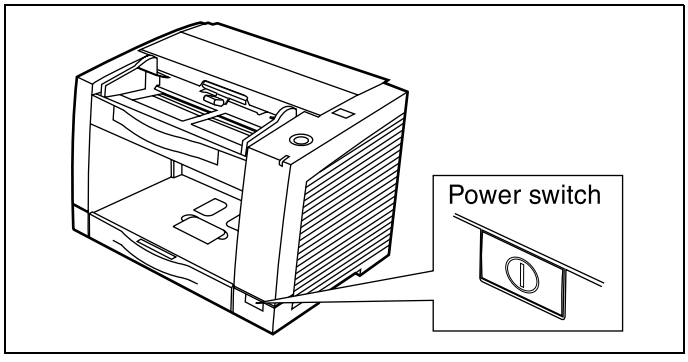
- **If the roller cleaning paper bag is left opened for a long period of time before using it, the alcohol will evaporate. Please use the roller cleaning paper immediately after opening the bag.**
- **Before using the roller cleaning paper, please read the safety information on the Operation Manual enclosed with the roller cleaning paper.**



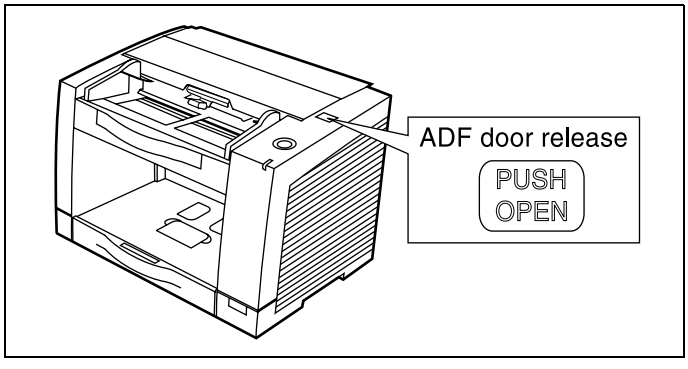
The roller cleaning paper (Model No. KV-SS03) is available from the dealer where you purchased your scanner.

For supplies and accessories: Call 1-866-823-0002 (U.S.A. only) or your dealer.

1 Turn the power off.

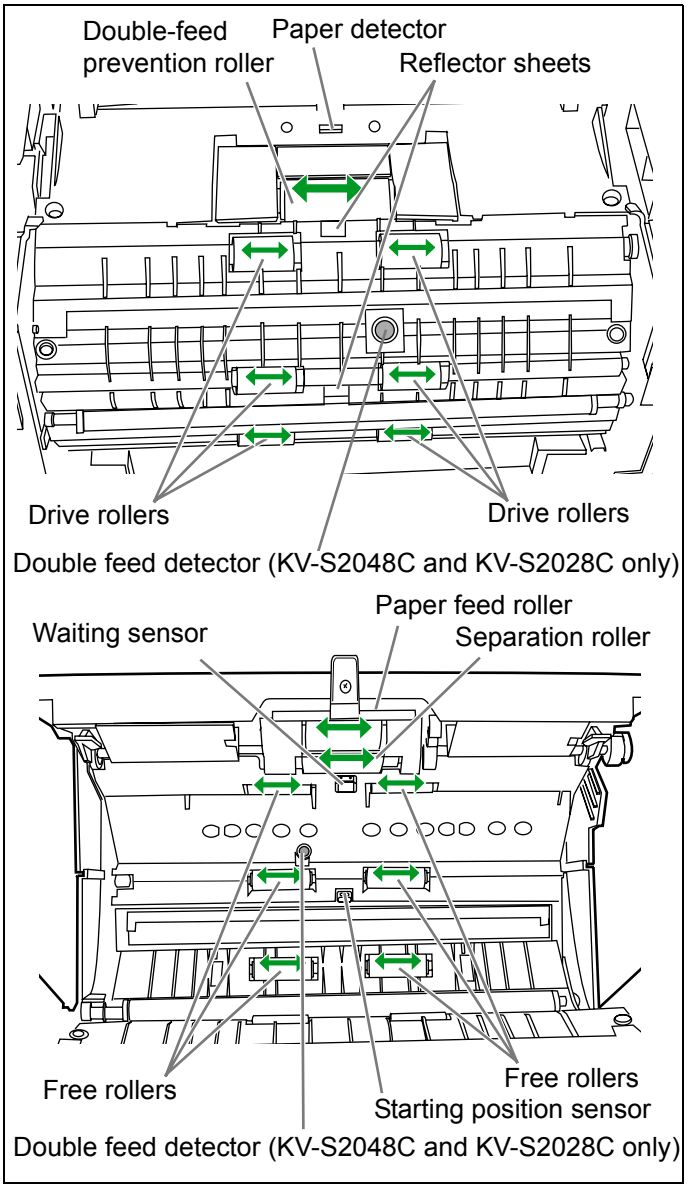


2 Push the ADF door release to open the ADF door.



3 Use the roller cleaning paper (KV-SS03) to remove the dirt from the surfaces of the double-feed prevention roller, paper feed roller, separation roller, 6 drive rollers, and 6 free rollers.
Remove dust on the paper sensors (Paper detector, Double feed detectors, Waiting sensor, and Starting position sensor) and reflector sheets with a cotton swab.

- **When wiping off the dirt on the roller surfaces, hold the rollers to prevent them from rotating, and wipe the rollers all the way around them proceeding from one end to the other in the directions of the arrows shown in the figure on the right.**



4 Make sure that the sensor rollers are installed properly, before closing the ADF door.

- **If the sensor rollers are removed, re-attach them. (Refer to page 34.)**

5 Close the ADF door.

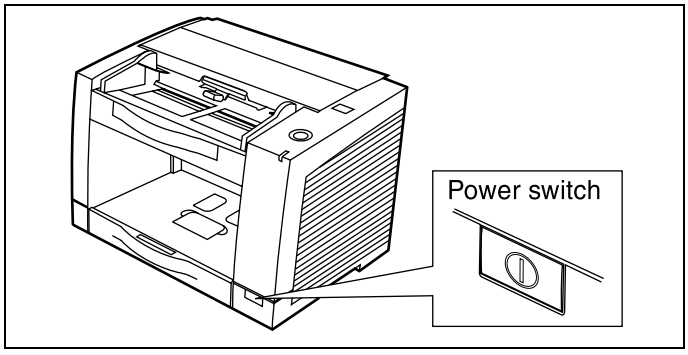
- **When you close the ADF door, close it securely until the door is locked.**

6 Clear the roller cleaning counter with the User Utility.

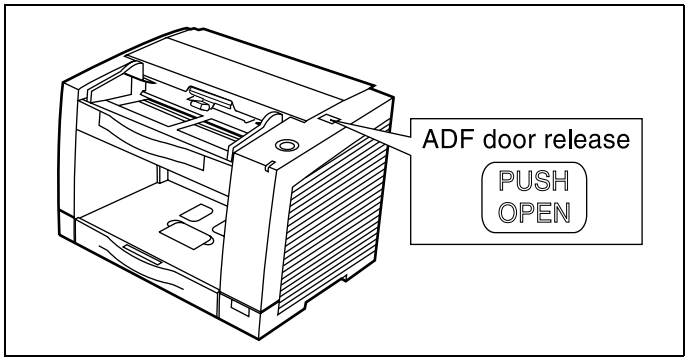
- **After the rollers have been cleaned, press the [Clear Counter] button in the "User Utility" to clear the [After Clean Roller] counter to zero.**
- **Refer to the User Utility Reference Manual.**

■ Cleaning the CIS glasses and sensor rollers

1 Turn the power off.

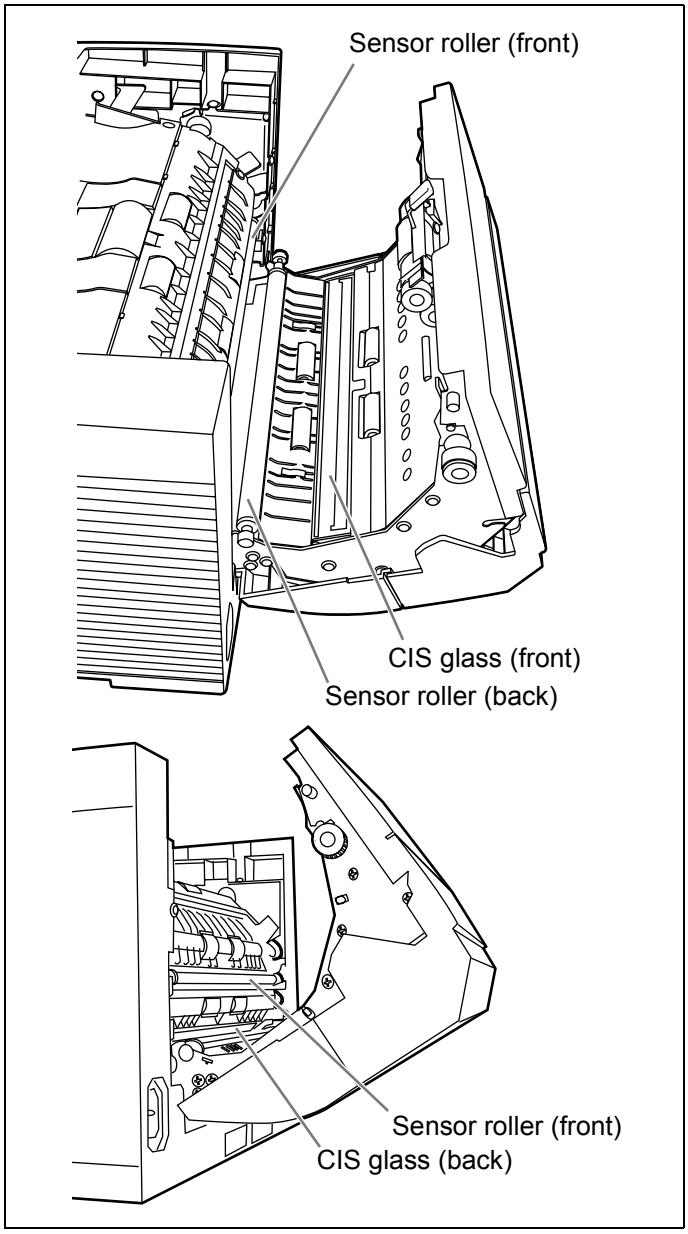


2 Push the ADF door release to open the ADF door.



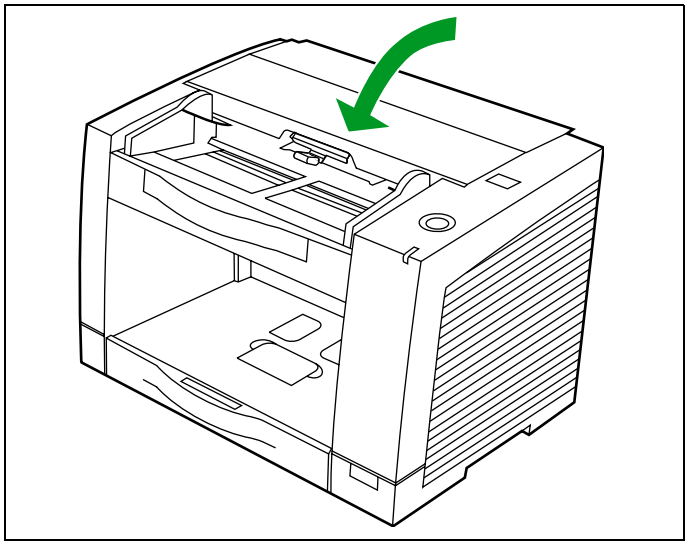
3 Clean the CIS glasses and sensor rollers using the roller cleaning paper.

- **If the sensor rollers are removed while cleaning, re-attach them after cleaning.**



4 Close the ADF door.

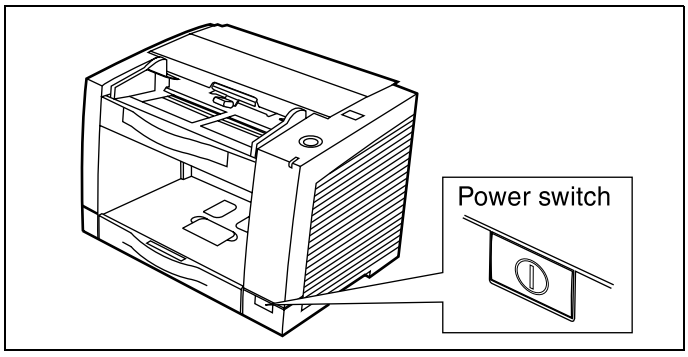
- **When you close the ADF door, close it securely until the door is locked.**



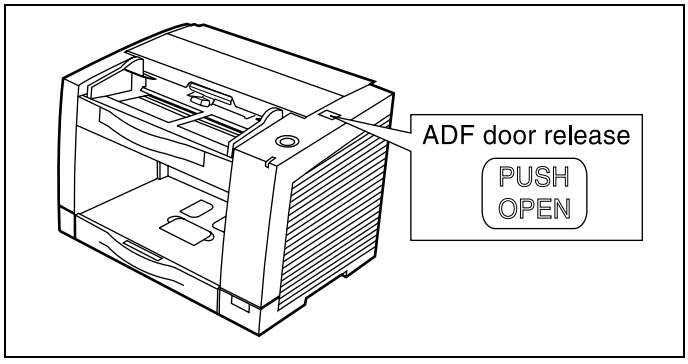
Replacing Consumables

■ Replacing the paper feed roller module

1 Turn the power off.

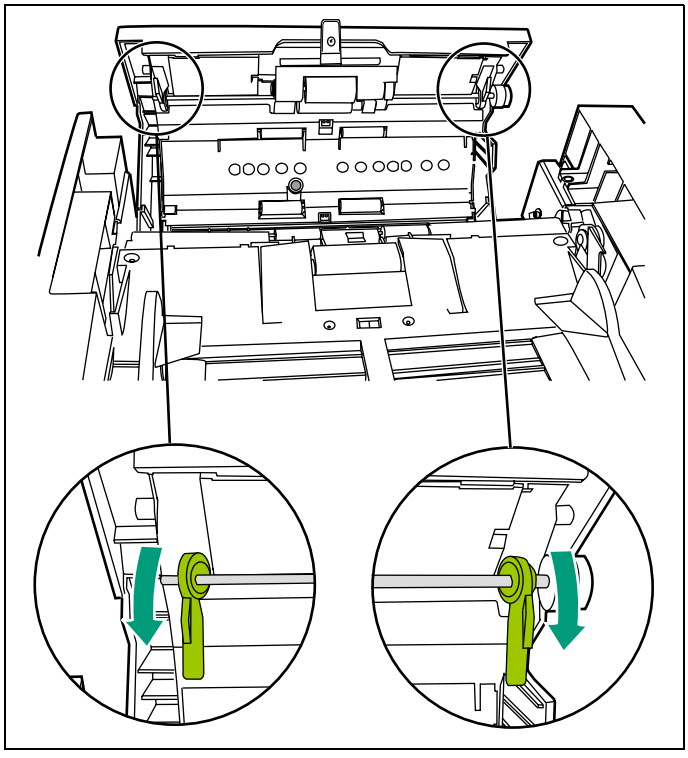


2 Push the ADF door release to open the ADF door.

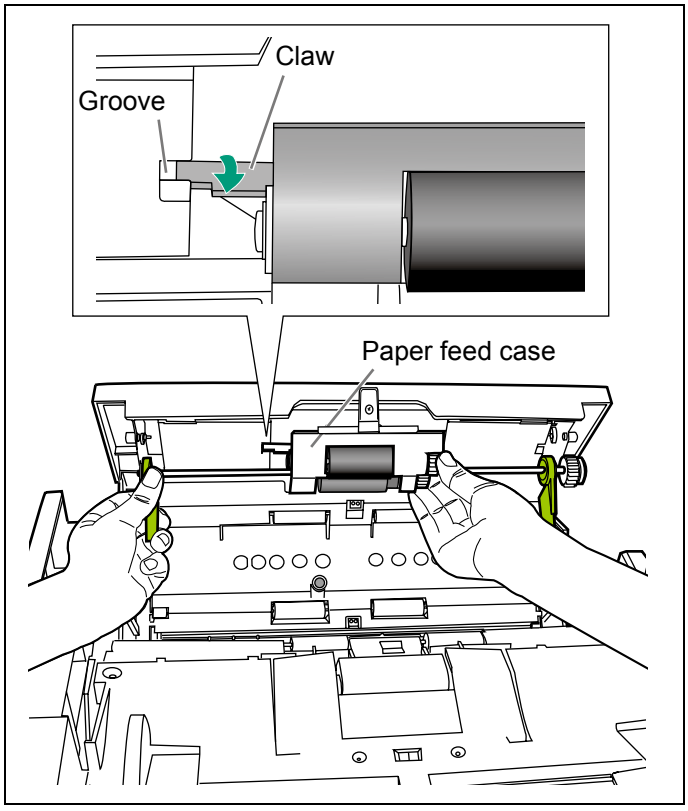


3 Push the two green levers down at both ends of the paper feed roller module to unlock the paper feed rollers.

- **When moving the green levers, do not apply pressure in any other direction other than in the direction shown by the arrows. Otherwise the levers may break.**

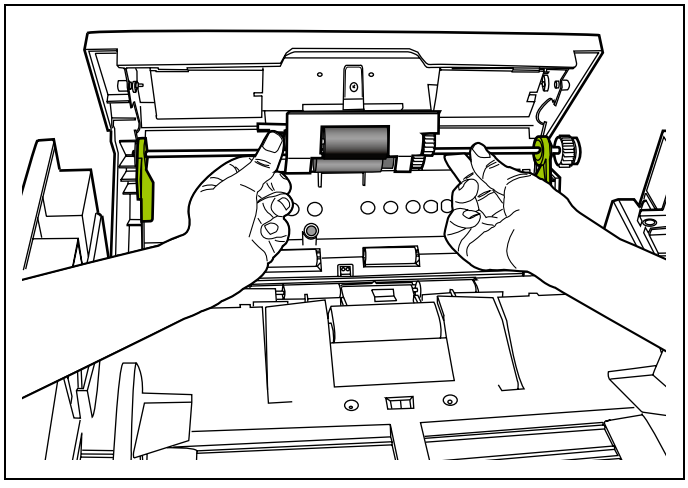


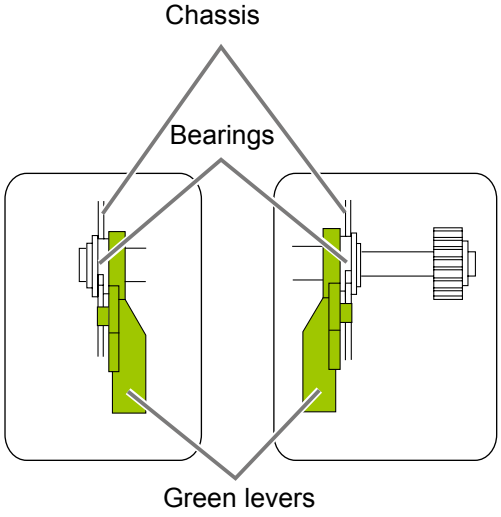
4 Remove the paper feed roller module straightly, holding up the paper feed case along the groove of the feed cover to pull out the claw out of the case.



5 Install the new paper feed roller module with its gear on the right.

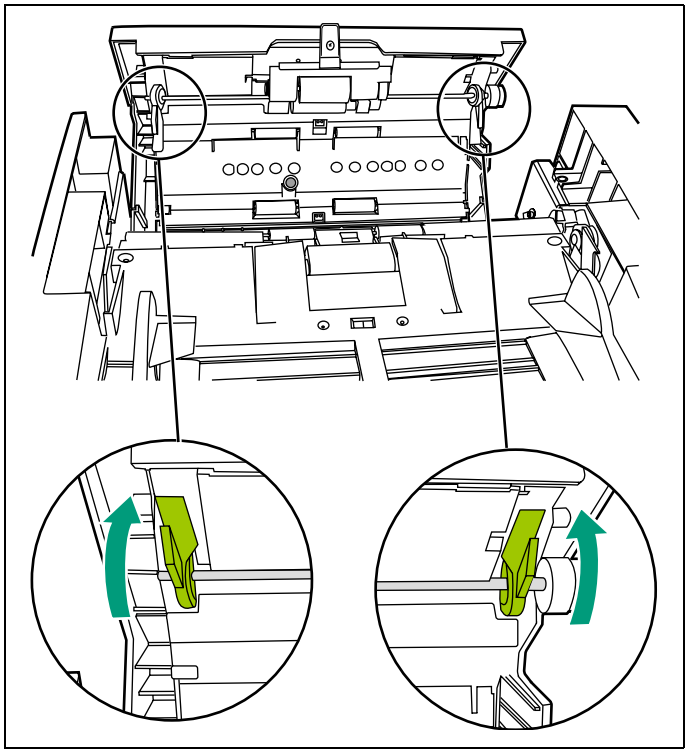
1 Hang both ends of the paper feed roller module.
2 While slightly lifting the paper feed roller module, pass the claw along the groove of the feed cover.
3 Attach the bearings at both ends of the paper feed roller module into the guide grooves of the chassis in the scanner.





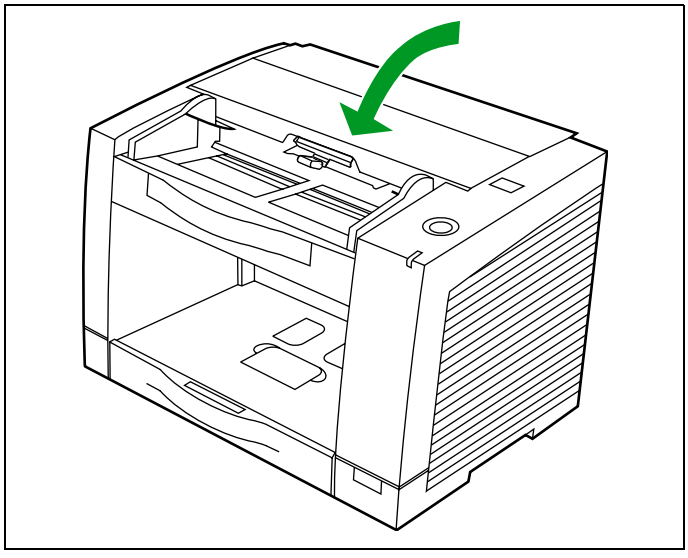
6 Push up the green levers at both ends in the direction of the arrows until they click into place.

- **After installing the paper feed roller module, confirm that the feed rollers can be moved lightly in vertical direction.**



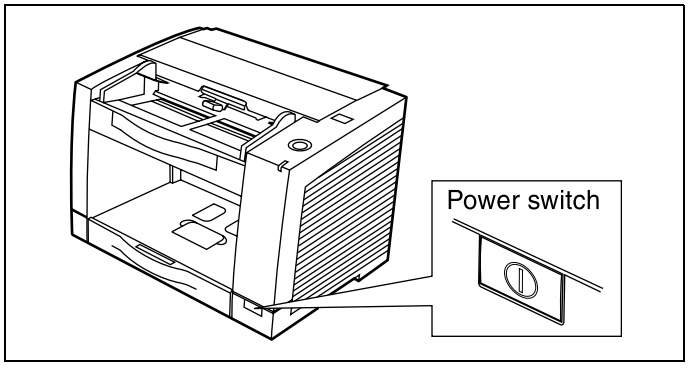
7 Close the ADF door.

- **When you close the ADF door, close it securely until the door is locked.**

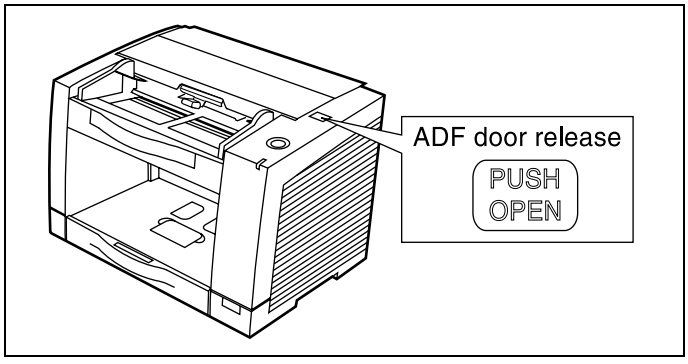


■ Replacing the double-feed prevention roller module

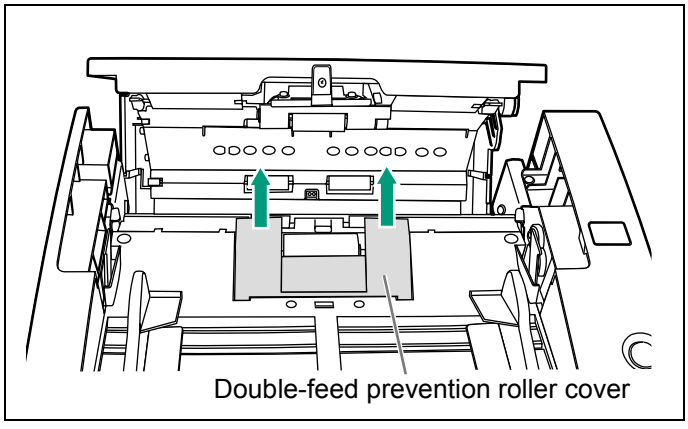
1 Turn the power off.



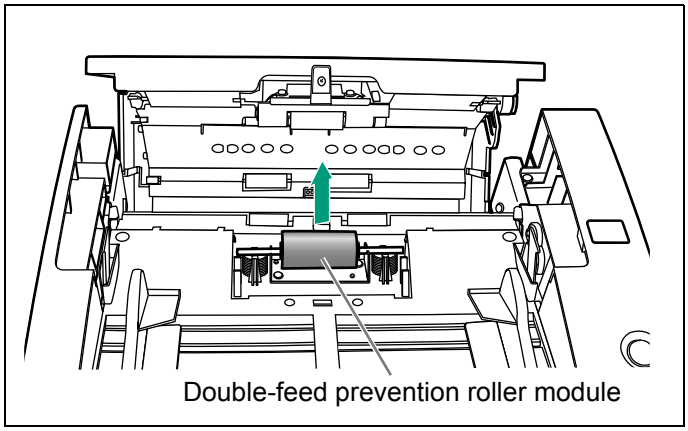
2 Push the ADF door release to open the ADF door.



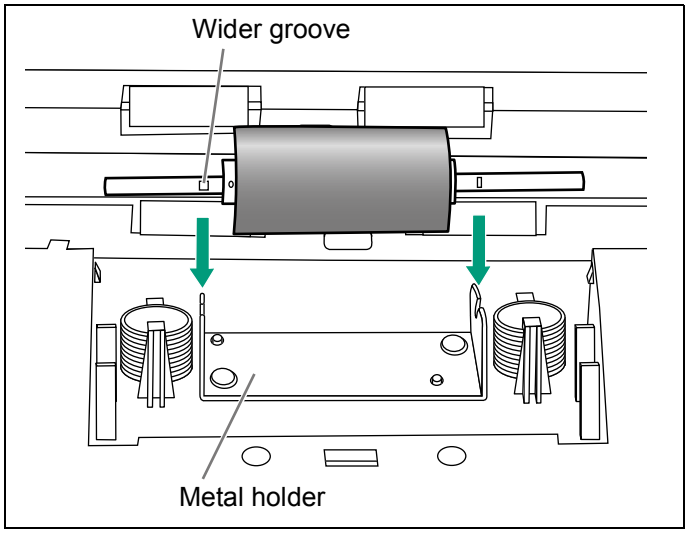
3 Remove the double-feed prevention roller cover.



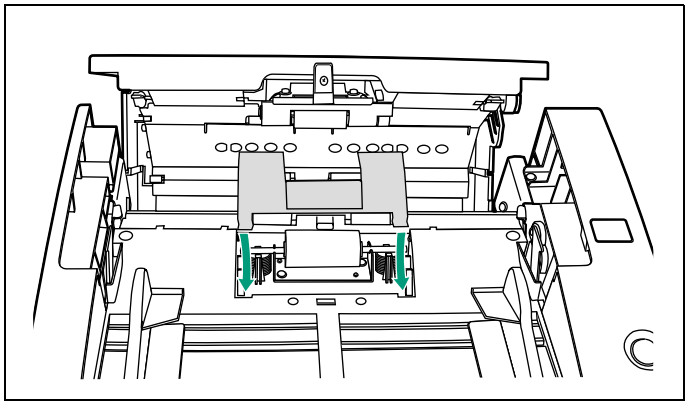
4 Remove the double-feed prevention roller module in the direction of the arrow.



5 Install the new double-feed prevention roller module by matching the groove of its shaft with the groove of the metal holder.
Make sure that both ends of the shaft reach the springs of the holder.

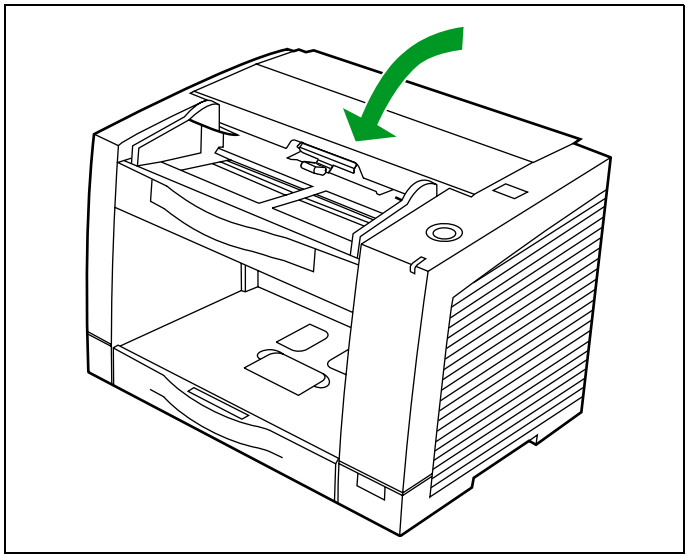


6 Close the double-feed prevention roller cover.



7 Close the ADF door.

- **When you close the ADF door, close it securely until the door is locked.**



8 Clear the roller replacing counter with the User Utility.

- **After the rollers have been replaced, press the [Clear Counter] button in the "User Utility" to clear the [After Replace Roller] counter to zero.**
- **Refer to the User Utility Reference Manual.**

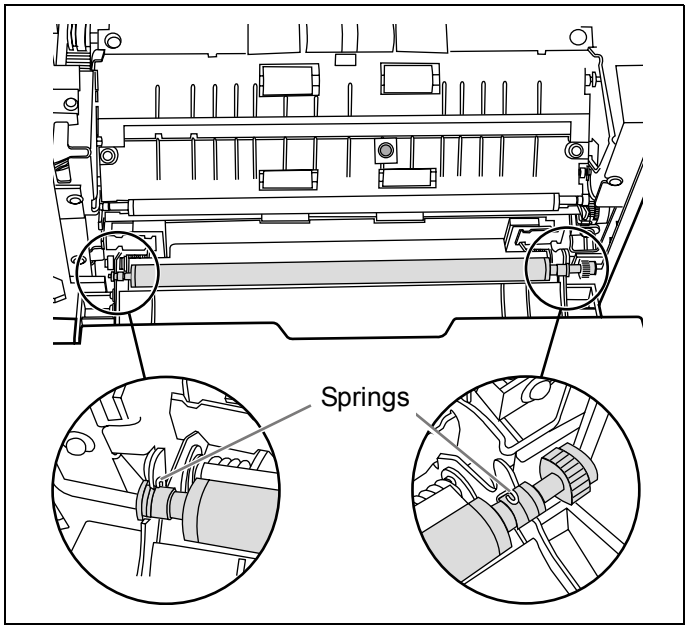
How to re-attach the sensor rollers

If the sensor rollers are removed, re-attach them.

■ Re-attach the sensor roller for back scanning to the ADF door

Attach the shorter sensor roller to the ADF door by placing the non-gear side to the ADF door release.

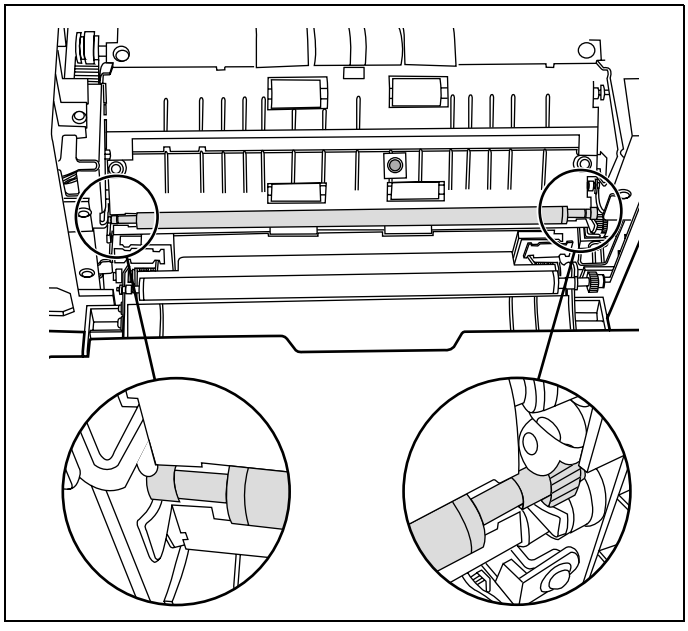
- **Match the groove to the guide.**
- **Push the roller, and confirm the sensor is locked by the springs on both sides.**



■ Re-attach the sensor roller for front scanning

Attach the longer roller to the unit by placing the non-gear side to the ADF door release.

- **Match the groove to the guide.**
- **Attach the side of the ADF door release first, and attach the other side.**



Confirm both rollers move slightly.

- **Press down on the sensor rollers and rotate them.**

Shading Adjustment

(For KV-S2048C and KV-S2028C only)

● What is the purpose of the shading adjustment?

The process whereby the variations in the distribution of the lamp's light quantity are transformed into a fixed output within the scanning range is known as shading adjustment. It can be carried out by means of the User Utility using the special shading paper which is provided with this scanner.

● When shading adjustment is required

Proceed with the compensation when the colors in some parts of the scanned images differ in the extreme, or when the image quality fails to be improved even after the inside the scanner is cleaned.

● Before proceeding with the shading adjustment

Before proceeding, be absolutely sure to thoroughly clean the CIS glasses, transport path, drive rollers, free rollers, and sensor rollers using the roller cleaning paper.
If the shading adjustment is carried out while these parts are still dirty, it will not be possible to eliminate the lines that form on the scanned images.

● Shading adjustment procedure

1. Start the User Utility.
2. Click "User Shading" on the main menu, and operate as the image display dictates. For further details, refer to "User Shading" section in the User Utility Reference Manual.

● Caution

If the scanned images are still lined after the shading adjustment has been performed and if these lines are not eliminated even after the ADF glass areas have been cleaned, it means that the shading has not been compensated properly. Clean the parts again, and then proceed with the shading adjustment.

Repacking Instructions

■ KV-S2048C, KV-S2028C, KV-S2026C / S2026CU / S2026CA

It is highly recommended that you keep the original carton and ALL packing materials. If you need to transport or ship your scanner, please follow these instructions.

Please Note:

- Please use the original carton and all of the original packing materials.
- Improper repacking of the scanner may result in a service charge to repair the unit.
- The scanner should be handled in the correct (horizontal) position.

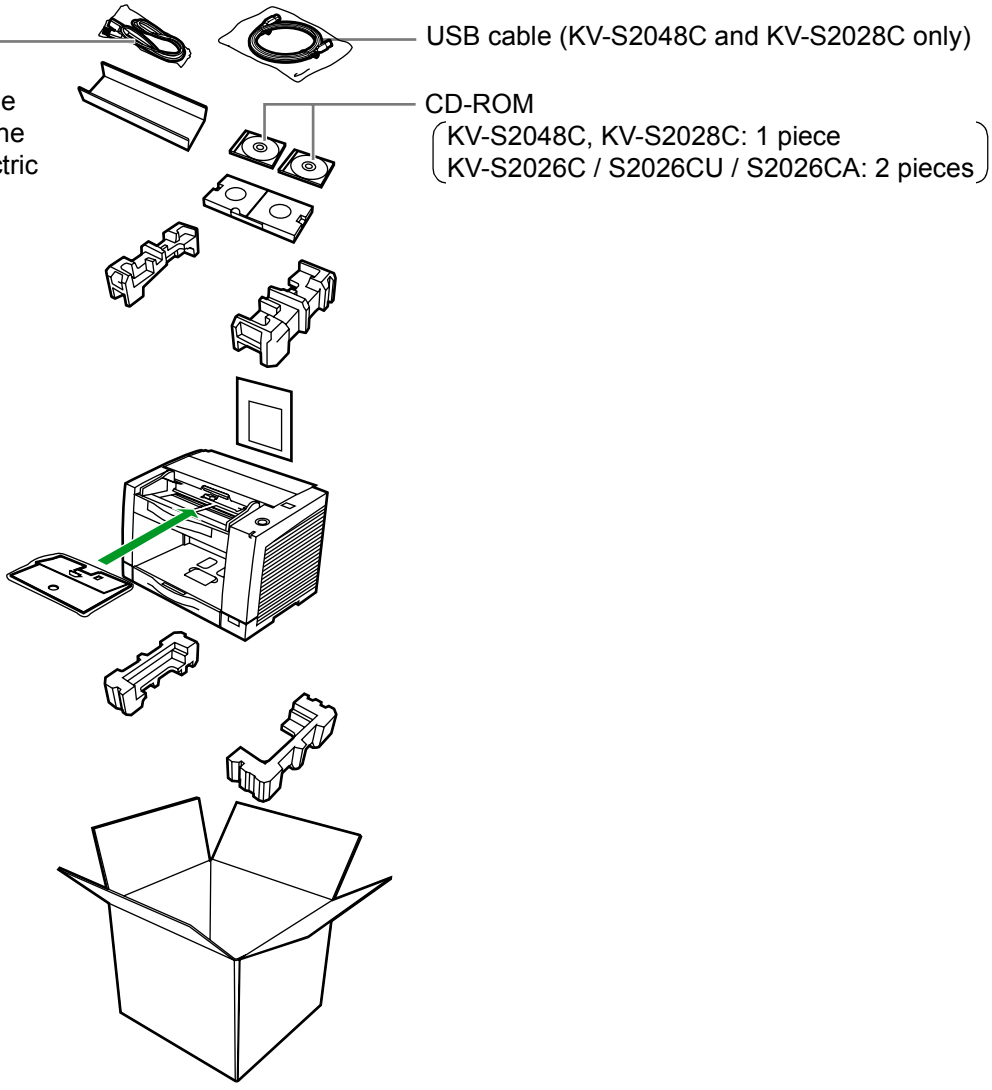
Materials Required:

- Original Scanner Carton & Packing Materials
- Shipping Tape and Scissors

1 Turn the power switch off and disconnect your scanner from the electrical outlet and the interface cable.

2 Return the feed extension tray, exit stopper and exit extension tray to their original positions.

3 Pack the scanner.


Power cord
• Be sure to use a power cord whose shape matches the shape of the electric outlet.
USB cable (KV-S2048C and KV-S2028C only)
CD-ROM
KV-S2048C, KV-S2028C: 1 piece
KV-S2026C / S2026CU / S2026CA: 2 pieces

■ KV-S2046C / S2046CU / S2046CA

It is highly recommended that you keep the original carton and ALL packing materials. If you need to transport or ship your scanner, please follow these instructions.

Please Note:

- Please use the original carton and all of the original packing materials.
- Improper repacking of the scanner may result in a service charge to repair the unit.
- The scanner should be handled in the correct (horizontal) position.

Materials Required:

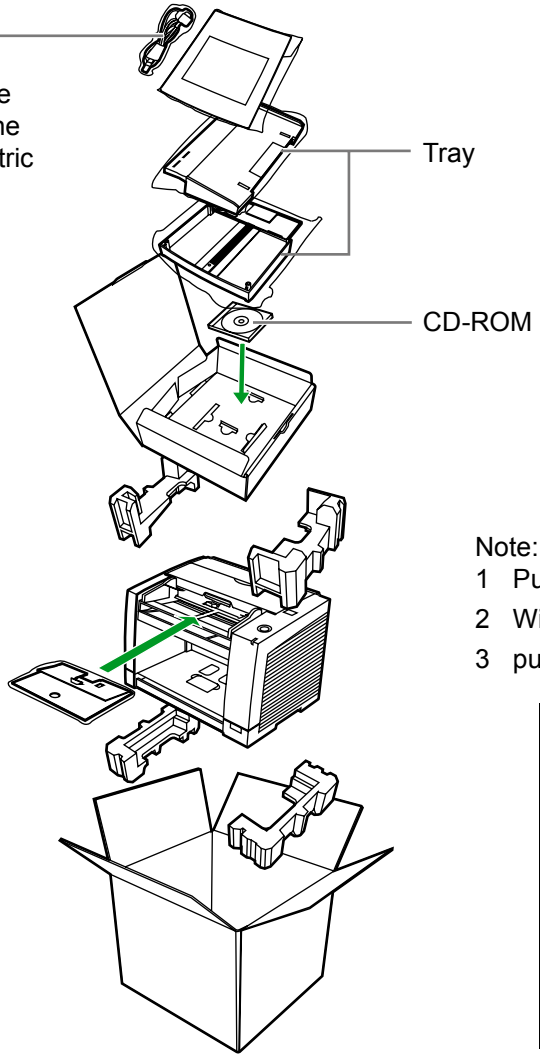
- Original Scanner Carton & Packing Materials
- Shipping Tape and Scissors

1 Turn the power switch off and disconnect your scanner from the electrical outlet and the interface cable.

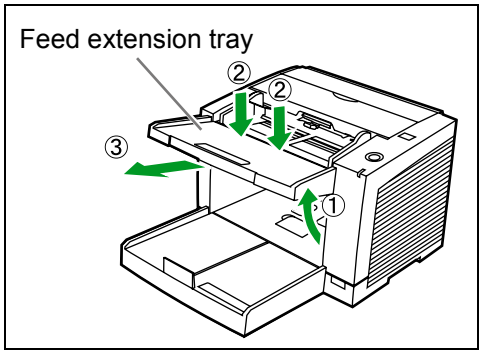
2 Remove the feed extension tray and exit extension tray.

3 Pack the scanner.

Power cord
- Be sure to use a power cord whose shape matches the shape of the electric outlet.



Note: How to remove the feed extension tray
1 Pull up the tray.
2 With pressing down the center of the tray,
3 pull out the tray.



Specifications

Items \ Model No.			KV-S2048C	KV-S2046C KV-S2046CU KV-S2046CA	KV-S2028C	KV-S2026C KV-S2026CU KV-S2026CA
Scanner	Scanning face		Duplex			
	Scanning method		CIS (Contact-type color image sensor) Front & Back sides Background: Black sensor roller			
	Scanning speed *1 Letter size portrait	Binary 200 dpi	SimplexApprox. 43 pages/min. DuplexApprox. 76 images/min.		SimplexApprox. 23 pages/min. Duplex Approx. 42 images/min.	
		Color 150 dpi	SimplexApprox. 19 pages/min. DuplexApprox. 34 images/min.		SimplexApprox. 10 pages/min. Duplex Approx. 18 images/min.	
	Scanning speed *1 A4 size portrait	Binary 200 dpi	SimplexApprox. 41 pages/min. DuplexApprox. 72 images/min.		SimplexApprox. 22 pages/min. Duplex Approx. 40 images/min.	
		Color 150 dpi	SimplexApprox. 18 pages/min. DuplexApprox. 32 images/min.		SimplexApprox. 9 pages/min. Duplex Approx. 16 images/min.	
	Resolution		100-600 dpi (10 dpi step) Optical: 600 dpi (Main and Sub scanning directions)			
	Tonal gradation		Binary mode, Gray scale mode (4/8 bit), Dither mode (16/256 step), Error diffusion **Note: Dither and Error diffusion are executed by driver software or RTIV.**			
	Image control		Image emphasis (5 step), Dynamic threshold, Automatic separation, Noise reduction, Deskew, Cropping, Mirror image, Monochrome reversing, Gamma correction **Note: These all functions are executed by driver software or RTIV.**			
	Other function		Patch code detection (Kodak patch 2, 3, T) **Note: 1 portion both side each executed only by ISIS driver.**			
	Paper	Size	50.8 x 70 mm (2.0 x 2.8 in.) to 216 x 356 mm (8.5 x 14 in.) **Note: The setting of the paper length is possible to 25 inches in TWAIN, ISIS and RTIV. In case of a paper beyond legal size, 1 by 1 paper scanning in the resolution under 300 dpi is recommended.**			
		Thickness	Single paper feeding: 0.05 to 0.15 mm (2.0 to 5.9 mils) Continuous paper feeding: 0.06 to 0.15 mm (2.36 to 5.9 mils) **Note: 1 mil = 1/1000 in.**			
		Weight	Single paper feeding: 40 to 127 g/m^2 (10.7 to 33.9 lbs.) Continuous paper feeding: 50 to 127 g/m^2 (13.3 to 33.9 lbs.) **Note: 1 lbs = 3.75 g/m^2**			
	Double feed detection		Ultrasonic	Document length	Ultrasonic	Document length
	Interface (Transfer rate)		USB 2.0	SCSI III (20 MB/sec) USB 2.0	USB 2.0	SCSI III (20 MB/sec) USB 2.0
	Feed tray capacity		120 sheets [64 g/m^2 (17 lbs.)], 100 sheets [75 g/m^2 (20 lbs.)]			

<table>
<tr><th colspan="3">Items / Model No.</th><th>KV-S2048C</th><th>KV-S2046C
KV-S2046CU
KV-S2046CA</th><th>KV-S2028C</th><th>KV-S2026C
KV-S2026CU
KV-S2026CA</th></tr>
<tr><td rowspan="6">Unit</td><td colspan="2">External dimensions (Width x Depth x Height)</td><td>343 x 487 x 269 mm
(13.5 x 19.2 x 10.6 in.)
Note: When tray is pulled</td><td>343 x 487 x 239 mm
(13.5 x 19.2 x 9.4 in.)
Note: When tray is installed</td><td colspan="2">343 x 487 x 269 mm
(13.5 x 19.2 x 10.6 in.)
Note: When tray is pulled</td></tr>
<tr><td colspan="2">Weight</td><td colspan="2">9.1 kg (20.1 lbs.)</td><td>8.6 kg (19.0 lbs.)</td><td>8.5 kg (18.7 lbs.)</td></tr>
<tr><td colspan="2">Power requirement</td><td colspan="4">AC100 - 120 V 50/60 Hz
AC220 - 240 V 50/60 Hz</td></tr>
<tr><td rowspan="3">Power consump-tion</td><td>Maximum (Scanning)</td><td colspan="4">1 A (AC100 - 120 V)
0.5 A (AC220 - 240 V)</td></tr>
<tr><td>Minimum (Standby)</td><td>0.3 A (AC100 - 120 V)
0.2 A (AC220 - 240 V)</td><td>0.35 A (AC100 - 120 V)
0.2 A (AC220 - 240 V)</td><td colspan="2">0.3 A (AC100 - 120 V)
0.2 A (AC220 - 240 V)</td></tr>
<tr><td>Sleep mode</td><td>3.5 W (AC100 - 120 V)
6 W (AC220 - 240 V)</td><td>6 W (AC100 - 120 V)
8 W (AC220 - 240 V)</td><td>3.5 W (AC100 - 120 V)
6 W (AC220 - 240 V)</td><td>6 W (AC100 - 120 V)
8 W (AC220 - 240 V)</td></tr>
<tr><td rowspan="2">Environ-ment</td><td colspan="2">Operating temperature and humidity</td><td colspan="4">Temperature: 15 °C to 30 °C (59 °F to 86 °F)
Humidity: 30 % to 80 % RH</td></tr>
<tr><td colspan="2">Storage temperature and humidity</td><td colspan="4">Temperature: 0 °C to 35 °C (32 °F to 95 °F)
Humidity: 10 % to 80 % RH</td></tr>
<tr><td colspan="3">Accessories</td><td colspan="4">CD-ROM(s)
Printed documents (Safety and Installation guide)
Power cord
Roller cleaning paper
USB cable (For KV-S2048C and KV-S2028C only)
Shading paper (For KV-S2048C and KV-S2028C only)</td></tr>
<tr><td colspan="3" rowspan="3">Option/Consumables *2</td><td colspan="4">White roller kit (KV-SS023)
Roller Exchange Kit with Black Sensor Roller (KV-SS024)
Roller Exchange Kit with White Sensor Roller (KV-SS025)
Roller cleaning paper (KV-SS03)</td></tr>
<tr><td>Imprinter Unit (KV-SS032)</td><td>Imprinter Unit (KV-SS020)</td><td colspan="2">-</td></tr>
<tr><td colspan="2">Ink cartridge (KV-SS021)</td><td colspan="2">-</td></tr>
</table>

*1 The scanning speed depends on the test environment.
The scanning speed differs depending on the host computer operating environment or application.

*2 To change the paper feed roller module and double-feed prevention roller, see below.

■ Changing the paper feed roller module and double-feed prevention roller

To ensure long performance, Panasonic recommends changing the paper feed roller module and double-feed prevention roller after 300, 000 sheets have been scanned.
If double feeding or paper jamming occurs frequently even after roller cleaning, please call your dealer, and order a "Roller Excahnge Kit".

- Before replacing each roller, refer to “Replacing Consumables” on page 29.

Troubleshooting

If a problem occurs while the unit is being used, check the following items and check the scanner status by User Utility. If the unit still malfunctions, turn it OFF, unplug the power cord and call for service.

Symptom		Possible Cause	Remedy
The LED does not light when the power switch is turned ON.		Problem with the AC outlet.	Check and reset the circuit breaker.
		The power cord is not plugged in.	Insert the power plug firmly.
		Problem with power supply.	Disconnect the scanner from the electric outlet and call for service.
The computer does not recognize the scanner.		The scanner is not connected to the computer correctly.	Connect the cables correctly.
		The scanner is not registered correctly.	Uninstall the scanner from PC. Register the scanner hardware again. (See page 14.)
	SCSI connection	The computer cannot recognize the SCSI card.	Check your computer whether the SCSI card is installed correctly using the device manager's property.
		The same ID number is used for the scanner and the other device.	Use the different SCSI ID numbers for each devices.
		The terminator is not set correctly.	If the scanner is the last device in the SCSI chain, set the DIP switch of SCSI terminator to Enable. If the scanner is not the last device in the SCSI chain, set the DIP switch of SCSI terminator to Disable.
		The scanner was turned on after the computer was turned on.	Turn the computer OFF. Turn the scanner ON, and then turn the computer ON again.
	USB connection	The USB interface of the computer is not installed correctly.	Check the computer whether the USB interface of your computer is correctly using the device manager's property.
		The scanner is connected via USB hub.	Do not connect via USB hub.
		The cable without High-Seed logo is used.	Use the cable with High-Speed logo.
Scan speed is slow at USB connection.		The scanner is connected with USB 1.1.	Connect with USB 2.0.
The ADF does not open when the ADF door release is pushed.		The ADF door is not closed properly.	Push the ADF door release again after you close the ADF door until it is locked.
The document has been loaded on the feed tray. But the scanner does not start scanning.		The document is not loaded properly.	Load the document correctly. (See page 19.)
		The sensor cannot detect the document as the edge of the document is curled.	Flatten the document and load it again.
		The sensors or reflector sheets are dirty.	Clean the sensors and reflector sheets. (See page 24.)

Symptom	Possible Cause	Remedy
Double feeding or skewing problems occur frequently or the scanner stops loading while scanning.	The rollers are dirty.	Clean all of the rollers. (See page 25.)
	The rollers have reached their life expectancy.	Replace the paper feed roller module and the double-feed prevention roller module. (See page 29 and page 32.)
	The document is curled or folded.	Flatten the document and load it again after reducing the pages.
	The irregular type document is to be scanned.	Make a copy of the document on specified paper (see page 38) and scan the copy.
	The document has a length of less than 70 mm (2.75z).	Make a copy of the document on paper of the specified size and scan the copy.
The scanned document is blank.	The document to be scanned was loaded face down (upside down).	Load the document correctly. (See page 19.)
Vertical lines appear on the scanned document.	The CIS glasses are dirty.	Clean the CIS glasses. (See page 27.)
	The sensor rollers are dirty.	Clean the sensor rollers. (See page 27.)
The scanning density is uneven.	The CIS glasses or the sensor rollers are dirty.	Clean the CIS glasses and the sensor rollers. (See page 27.)
The color of the scanned document is extremely different from the original document.	The setting of the monitor is wrong.	Adjust the monitor setting.
Dark spots or noise appear on the scanned documents.	The CIS glasses or the sensor rollers are dirty.	Clean the CIS glasses and the sensor rollers. (See page 27.)
Scanned image has moire fringes such as stripe or wavy pattern noise.	It is caused by printing pattern of the document and the congeniality of the scanning resolution.	Please change the resolution and try to scan.
Portions of the edge of the scanned document are dark.	The edge of document is folded or wrinkled.	Flatten the document. The Remove Shadow or Border Removal functions may also correct the problem. Refer to the PIE Reference Manual or the RTIV Reference Manual when using these functions.

If you still experience problems after following these suggestions, please contact our Technical Support Department at 1-800-726-2797 for further assistance. (U.S.A. only)

Index

Page

A

AC inlet 9, 10
Acceptable documents 18
Accessories 39
ADF door 9, 10
ADF door release 9, 10
All Drivers & Utilities installation 15
Application installation 17

B

Business card guides 9, 10, 20
Business card stopper 9, 10, 20

C

Caution labels 7
CIS glasses 28
Cleaning the CIS glasses 27
Cleaning the rollers 25
Cleaning the sensor rollers 27
Cleaning the sensors 25
Cleaning the unit 24
Clearing paper jams 22
Complete installation 14
Component identification 9
Custom installation 16

D

DIP switch 9, 10, 12
Document guides 9, 10, 19
Double feed detection 38
Double feed detector 26
Double-feed prevention roller 26
Double-feed prevention roller cover 32
Double-feed prevention roller module 32
Drive rollers 26

Page

E

ENERGY STAR 2
Exit extension tray 9, 10, 20
Exit stopper 9, 10, 20
Exit tray 9, 10
External dimensions 39

F

Feed extension tray 9, 10, 20
Feed tray 9, 10, 20
Feed tray capacity 38
For Your Safety 5
Free rollers 26

G

Green levers 29

I

Image control 38
Imprinter door 9, 10
Imprinter door pull 9, 10
Interface 38

L

LED 9, 10, 11
Limit mark 20
Loading documents 19

O

Operating temperature and humidity 39
Option/Consumables 39

Page

P

Paper 38
Paper detector 26
Paper feed roller 9, 10, 26
Paper feed roller module 29
Power consumption 39
Power cord 9, 10
Power requirement 39
Power switch 9, 10
Precautions 8

R

Radiation vent 9, 10, 24
Reflector sheets 26
Repacking 36
Replacing consumables 29
Replacing the double-feed prevention roller module 32
Resolution 38
Roller cleaning paper 25, 28
Roller exchange kit 39

S

Scanning face 38
Scanning method 38
Scanning speed 38
SCSI connectors 9, 10
SCSI setting 12
SCSI terminator 12
Sensor rollers 23, 28, 34
Separation roller 26
Shading adjustment 35
Specifications 38
Starting position sensor 26
STOP/START button 9, 10
Storage temperature and humidity 39

T

Tonal gradation 38
Troubleshooting 40

Page

U

Unacceptable document 18
USB cable 36, 39
USB connector 9, 10
User Utility 26, 33

W

Waiting sensor 26
Weight 39

Panasonic Communications Company of North America
Unit of Panasonic Corporation of North America
One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario, L4W 2T3

Panasonic Business Systems U.K.
A Division of Panasonic U.K. Ltd.
Willoughby Road, Bracknell, Berkshire, RG12 8FP

Panasonic Marketing Europe GmbH
Hagenauer Strasse 43, 65203 Wiesbaden, Germany

For information of Compliance with EU relevant Regulatory Directives, Contact to Authorised Representative:
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany

Panasonic Corporation
Web Site: http://panasonic.net

© Panasonic Communications Co., Ltd. 2007

F1108FS0